Socio-Economic Conditions of Drought Prone Areas in Rajasthan

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CENTRAL WATER COMMISSION
NEW DELHI

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This is the second part of the Bench Mark Studies on Socio-Economic Conditions of Drought Prone Areas in Uttar Pradesh and Rajasthan. The study is based on primary data collected from the thirty six villages belonging to Ajmer, Banswara, Barmer and Churu districts of Rajasthan. There has been undue long delay in completion of the study on account of a number of unavoidable reasons.

We wish to thank a host of persons engaged in the collection and tabulation of primary data. Our sincere thanks are due to Prof. B.K. Joshi, the Director of the Institute for his support and encouragement in completion of the study. Last but not the least we are thankful to Mr Manoharan K, who typed the manuscript efficiently.

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CHAPTER I

INTRODUCTION

About one-third of India is drought prone. The average annual losses on account of drought have been assessed at Rs.1500 to 2000 millions. These perpetual losses have grave consequences on the economy of the country. In order to eradicate human miseries on account of recurring drought, the state evolved suitable strategy. The Rural Works programme launched in India during 1970-71 was the first attempt in this direction. The main objective of this programme was to create rural employment through construction of productive assets like irrigation, rural roads and afforestation. But these employment oriented schemes could not yield fruits large enough to overcome the problem of development of drought prone areas. Therefore, during the period of the Fifth Plan, there was shift in approach to Integrated Area Development with emphasis on the identifica-tion of core sectors, availability of resource potentials, local needs and linkages between core sectors for optimum use of the resources. Within this broad framework, a comprehensive drought prone areas development programme was launched in India during 1974-75.

1.1 Content of the Programme

Since its inception, the main objective of DPAP was to bring about an improvement in the socio-economic status of small and marginal farmers and landless labourers through securing the optimum utilization of land, water, livestock and manpower resources increasing income of the weaker section and by reducing the severity of drought in long run. The major thrust of the effort was to restore a proper ecological balance in drought-prone areas through enforcement of the following key elements of the programme :

1. Development and management of water resources.
2. Soil and moisture conservation measures.
3. Afforestation with special emphasis on social and farm forestry.
4. Development of pasture lands with the development of sheep husbandry.
5. Livestock and dairy development.
6. Restructuring of cropping pattern and changes in agronomic practices.
7. Development of subsidiary occupations.

1.2 Drought-Prone Areas in Rajasthan

The geographical area of Rajasthan is 342,239 sq. kms. The thirteen districts of the state have been identified as drought prone by the Irrigation Commission, Drought Prone Area Programme (DPAP) and National Commission on Agriculture

(1976). These districts had area of 214,592 sq. kms. or 62 per cent of the total area of state. The 45 per cent of the state population is affected by the recurring drought. The districts which have been identified as drought prone are : Ajmer, Banswara, Barmer, Bikaner, Churu, Dungarpur, Jaisalmer, Jalor, Jhunjhunun, Jodhpur, Nagaur, Pali and Udaipur.

1.3 Need and Objectives of the Study

It was felt at the national level that although development and management of irrigation sources was one of the measures to be given due consideration in Drought Prone Area Programme, aspects of availability of ground and surface water resources and their proper planning for making water available to the farmers for irrigation purpose could receive only partial treatment. Hence there was need for formulation of a national plan to chalk out an appropriate and suitable strategy for proper management of ground and surface water resources and their maximum possible exploitation in agriculture. Formulation of such strategy required not only the determination of investment size and its allocation pattern but also identification of areas and population. It further required ascertaining future prospects of the people in the upliftment of their living conditions if facility of assured irrigation could be provided in drought-prone areas.

The Central Water Commission (CWC), New Delhi requested Giri Institute of Development Studies, Lucknow to conduct a study on the existing socio-economic conditions of the drought prone ar as of Rajasthan. It was expected that the study would provide not only baseline data and certain basic information for the drought prone areas but also a realistic basis for evaluating the impact of various programmes launched in these areas from time to time. Besides, the study would also provide an insight into the conditions of drought-prone areas which would be useful while formulating development programmes. The major objectives of the study are as follows:

1. Socio-demographic features.
2. Agrarian Structure and basic sources of socio-economic dependence.
3. Impact of drought.
4. Income-expenditure liabilities.

1.4 Methodology

The four drought prone districts namely Ajmer, Banswara, Barmer and Churu were selected from Rajasthan following the criteria of actual rainfall and its coefficient of variation and percentage of net irrigated area to net area sown. While selecting blocks and villages from the selected districts, a single criteria of proportion of net irrigated area to net

sown area was applied. The three blocks were then selected from each district conforming to high, medium and low levels of irrigation and the similar criteria was applied in selecting three villages from each of the selected blocks. Further, a sample of 20 per cent households was drawn from each of the selected villages for the purpose of primary survey. The total number of households in each village were classified according to the size of land holdings. Seven groups of land holdings were made and then selection of households was done from each group following the procedure of stratified random sampling. However, in case of households numbering less than 100 in a village, a minimum of twenty households were selected as the following:

Table 1.1 : *Coverage of the Study*

Sl.No.	Drought Prone Units	Sample
1.	Districts	4
2.	Blocks	12
3.	Villages	36
4.	Households	6627

Both primary and secondary data were collected for analysis in the study. We have already finalised the profiles of Ajmer, Banswara, Barmer and Churu districts of Rajasthan. This volume of the Bench MarkStudy aims at

portraying the socio-economic conditions of the sample drought prone districts. By and large the analysis is based on the data/information collected from the sample households through pre-structured questionnaire.

CHAPTER II

SOCIO-ECONOMIC CHARACTERISTICS OF THE SAMPLE VILLAGES

In this chapter, the socio-economic characteristics of the sample drought prone villages of Rajasthan have been examined and analysed. There were nine villages selected from each of the sample districts. Thus, the information collected from thirty six sample villages belonging to the Ajmer, Banswara, Barmer and Churu districts is the basis of this investigation. The relevant data were collected on the basis of pre-structured village schedule.

2.1 Population and Occupation

There were total 6627 households in 36 selected villages of Ajmer, Banswara, Barmer and Churu districts. The male-female ratio in total population was slightly more than half in case of male at the combined level of these four districts. However the Churu was the only district where sample villages showed the higher ratio of female population as compared to male in total population (Table 2.1). The average size of household had been 6 persons in Ajmer, 5

Table 2.1 : *Socio-Demographic Features of the Sample Villages*

Particulars	Ajmer	Banswara	Barmer	Churu	Combined
No. of Households	1805	1673	1811	1338	6627
Total Population	10820 (100.0)	9054 (100.0)	10515 (100.0)	11106 (100.0)	41495 (100.0)
Male	5580 (51.57)	4766 (52.64)	5376 (51.13)	5464 (49.20)	21186 (51.06)
Female	5240 (48.43)	4288 (47.36)	5139 (48.87)	5642 (50.80)	20309 (48.94)
Average Family Size	5.99	5.41	5.81	8.30	6.26
Sex Ratio	939	900	956	1033	959
Literates	2477 (22.89)	1693 (18.70)	2598 (24.71)	2134 (19.21)	8902 (21.45)
Scheduled Caste	1829 (16.90)	2199 (24.29)	1068 (10.16)	1066 (9.60)	6162 (14.85)
Scheduled Tribe	-	209 (2.31)	862 (8.20)	5572 (50.17)	6643 (16.01)
No. of Workers	4267 (39.43)	2651 (29.28)	4137 (39.34)	3065 (27.60)	14120 (34.03)

Note : Figures in brackets refer to percentage to total.

persons in Banswara, 6 persons in Barmer, 6 persons in Churu and 6 persons in all the villages taken together. The sex ratio had been 939 in Ajmer, 900 in Banswara, 956 in Barmer, 1033 in Churu and 959 at the aggregate level. The scheduled castes and scheduled tribes were 6162 and 6643 respectively in all sample villages. In this way the percentage of scheduled tribe population was higher than scheduled caste in

these villages. The villages of Ajmer district had no scheduled tribe population. In the villages of Banswara district the scheduled tribe population was very marginal. The tribal population was substantial in sample villages of Barmer district and in the villages of Churu district the tribals were in majority with population of more than half in the total population.

The level of literacy was found to be low, i.e., 21.45 per cent in all the four districts combined. Highest literacy was found in Barmer, i.e. 24.71 per cent followed by 22.89 per cent in Ajmer, 19.21 per cent in Churu and 18.70 per cent in Banswara districts.

The 34.04 per cent of the total population constituted the workforce in the sample villages of these four districts. The share of workers in total population was 39.43 per cent in Ajmer followed by 29.28 per cent in Banswara, 39.34 per cent in Barmer and 27.60 per cent in Churu district.

The occupational pattern of workforce in the villages of these four districts showed that agriculture was the main source of livelihood or income or employment for the people.

2.2 Land Use Pattern

The village information on the pattern of land use showed that the percentage of net area sown in the total reporting area was only 43.83 per cent in all the thirty-six

sample villages considered together. It was Churu district alone where around 80 per cent of the total area was under cultivation. On the other side, only 28 per cent of the total reporting area was sown in the sample villages of Barmer district (Table 2.2). Such a low level of net area

Table 2.2 : *Pattern of Land Use*

(Acres)

Particulars	Ajmer	Banswara	Barmer	Churu	Combined
Total reporting area	16929	13049	29683	7328	66989
Forest	1950 (11.52)	406 (3.11)	-	-	2356 (3.52)
Barren and Uncultivable Land	710 (4.20)	1764 (13.56)	10953 (36.90)	391 (5.33)	13818 (20.63)
Land put to non-agricultural uses	1143 (6.75)	552 (4.24)	424 (1.43)	-	2119 (3.16)
Culturable Waste	1653 (9.78)	638 (4.89)	2702 (9.10)	211 (2.88)	5207 (7.77)
Permanent Pasture & other grazing land	1888 (11.15)	1106 (8.47)	525 (1.77)	248 (3.39)	3767 (5.62)
Current Fallow	686 (4.05)	843 (6.63)	4912 (16.55)	365 (4.98)	6806 (10.16)
Other Fallow	706 (4.17)	866 (6.42)	2004 (6.75)	282 (3.84)	3858 (5.76)
Net area sown	8190 (48.38)	6874 (52.68)	8163 (27.50)	5831 (79.57)	29058 (43.38)
Area sown more than once	1883	2956	1469	2380	8688
Cropping Intensity	122.99	143.00	117.99	140.82	129.90

Note : Figures in brackets refer to percentage to total reporting area.

sown in the sample villages of Barmer district was the outcome of higher share of barren and unculturable waste and current fallow land of which shares were 37 per cent and 17 per cent respectively in total reporting area of the district. No land under forest cover was found in Barmer and Churu districts. In the villages of remaining two districts, around 12 per cent and 3 per cent of the total area was under forest coverage. The area under permanent pastures and other grazing land was found to be highest (11.15 per cent) in Ajmer followed by Banswara (8.47 per cent), Churu (3.39 per cent) and Barmer (1.77 per cent). The land diverted to non-agricultural uses was 8 per cent in Ajmer, 4 per cent in Banswara and 1 per cent in Churu district. The intensity of cropping was 129.90 per cent at the aggregative level. It was found to be highest in Banswara (143 per cent) followed by Churu (140.82 per cent), Ajmer (122.99 per cent) and the lowest in Barmer district (117.99 per cent).

The overall pattern of land use in the sample drought prone villages of Rajasthan did not present significant variations except in case of villages of Barmer district where large proportion of total area was reported to be barren and uncultivable. The situation of low intensity of cropping prevailed in these drought prone villages of Rajasthan if the comparisons were made with aggregative data of the country as a whole.

2.3 Land Ownership

The skewed pattern of land ownership among rural households is a common feature of the state agrarian economy. The drought prone districts under study are no exception to this as appeared from village data on land ownership (Table 2.3). There were 8.78 per cent landless households in all villages of four districts. Looking at district-wise scenario, 11.74 per cent of the total households in Ajmer district belonged to those owning no land followed by 11.32 per cent in Barmer, 8.67 per cent in Churu and 2.92 per cent in Banswara district. Those owning land upto one acre constituted 9.93 per cent of holdings but owned only 2.33 per cent of the total cultivated area in four districts combined. Those owning land upto 1 acre were 15.84 per cent of total holdings but owned only 5.97 per cent of the cultivated area in the villages of Banswara district followed by the villages of Barmer where 10.93 per cent holdings owned 1.94 per cent area and Ajmer where 10.53 per cent holdings owned 1.30 per cent area. The share of land size upto 1 acre of land was lowest in Churu district both in terms of number of holdings and area cultivated. In the four districts combined, households owning land between 1 to 2.5 acres were 21.70 per cent in total holdings but occupied only 8.18 per cent of the cultivated area. It is evident from the table that little over 50 per cent of the total cultivated area was under the control of 20 per cent land holdings in the four districts combined. Over 50 per cent of total cultivated area in

Ajmer was owned by 13 per cent households in the land owning category of 10 acres or above. Under this category of land ownership, Barmer followed more or less similar pattern as that of Ajmer. In Banswara, though the percentage of households under this category was 4.45 per cent but they controlled 36 per cent of the total cultivated area. Looking at the Churu district, it is evident that majority of

Table 2.3 : *istribution of Holdings and Area : According to the Farm Size Groups*

Land Size Groups (Acres)	Ajmer		Banswara		Barmer		Churu		Combined	
	No.of holdings	Cultivated Area	No.of holdings	Cultivated Area	No.of holdings	Cultivated Area	No.of holdings	Cultivated Area	No.of holdings	Cultivated Area
Landless	212 (11.74)	-	49 (2.92)	-	205 (11.32)	-	116 (8.67)	-	582 (8.78)	-
Upto 1.0	190 (10.53)	106.92 (1.30)	265 (15.84)	410.63 (5.97)	198 (10.93)	158.40 (1.94)	5 (0.37)	1.42 (0.02)	658 (9.93)	677.37 (2.33)
1.00-2.50	443 (24.54)	911.52 (11.13)	541 (32.34)	898.76 (13.08)	434 (23.96)	542.50 (6.65)	20 (1.49)	19.89 (0.35)	1438 (21.70)	2372.67 (8.18)
2.50-5.00	379 (21.00)	1311.05 (16.01)	451 (26.96)	1717.81 (24.99)	379 (20.93)	1011.93 (12.40)	90 (6.73)	172.73 (2.96)	1299 (19.60)	4213.52 (14.52)
5.0-10.00	342 (18.95)	1661.14 (20.28)	291 (17.39)	2046.70 (29.77)	345 (19.05)	2070.28 (25.36)	274 (20.48)	720.10 (12.35)	1252 (18.89)	6498.22 (22.40)
10.0-20.0	150 (8.31)	1934.77 (23.63)	66 (3.95)	1587.40 (23.09)	160 (8.83)	2400.30 (29.40)	428 (31.99)	2053.09 (35.21)	804 (12.13)	7975.56 (27.33)
20.0 +	89 (4.93)	2264.70 (27.65)	10 (0.60)	213.00 (3.10)	90 (4.98)	1980.00 (24.25)	405 (30.27)	2863.84 (49.11)	594 (8.96)	7321.54 (25.24)
Total	1805 (100.0)	8190.10 (100.0)	1673 (100.0)	6874.30 (100.0)	1811 (100.0)	8163.41 (100.0)	1388 (100.0)	5831.07 (100.0)	6627 (100.0)	29058.88 (100.0)

Note : Figures in brackets refer to percentage to total

households were owning large size of land. All the above analysis showed a highly skewed pattern of land ownership in the drought prone villages of the state.

2.4 Cropping Pattern

The drought prone areas have their own agro-climatic specificities which primely condition the pattern of crop cultivation. It is apparent that out of total cultivated area, 90.91 per cent was under cereal cultivation at the total level of all villages (Table 2.4). More or less similar proportion of area on which cereals were cultivated was found at each of the district level. Maximum 93.68 per cent of total cultivated area was under cereals in Barmer followed by 92.31 per cent in Churu, 90.36 per cent in Banswara and 87.55 per cent in Ajmer. The pulses, which are most important ingredients of local food consumption, were grown only on 4.08 per cent of total cultivated area of all villages. The inter-district variations in pulses cultivation were quite evident. The cultivation of non-food crops was relatively low in these villages as only 5.01 per cent of cultivated area was engaged in these crops. The largest percentage of cultivated area, i.e. 8.15 per cent under non-food crops was found to be in the villages of Ajmer district. The rose and guava were the two principal non-food crops grown extensively in the villages of Ajmer district.

Table 2.4 : *Crop Cultivation in Sample Villages*

(Acres)

Crop/District	Irrigated Area		Unirrigated Area		Total	
	Area	%age	Area	%age	Area	%age*
Area Under Cereals:						
Ajmer	1947	22.08	6865	77.92	8812	87.55
Banswara	2143	24.13	6739	75.87	8882	90.36
Barmer	882	9.79	8141	90.22	9023	93.68
Churu	889	11.72	6700	88.28	7589	92.31
Combined	5861	17.38	28452	72.82	34313	90.91
Area Under Pulses:						
Ajmer	28	6.31	405	93.69	433	4.30
Banswara	11	2.46	453	97.54	464	4.72
Barmer	-	-	268	100.00	268	2.78
Churu	-	-	372	100.00	372	4.53
Combined	39	3.96	1498	96.04	1513	4.08
Area Under Foodgrains:						
Ajmer	1314	14.20	7938	85.80	9252	91.85
Banswara	1243	13.30	8103	86.70	9346	95.08
Barmer	909	9.78	8382	90.22	9291	96.47
Churu	933	11.72	7028	88.28	7961	96.84
Combined	4399	12.25	31441	87.75	35840	94.99
Area Under Non-Foodgrains:						
Ajmer	704	85.80	117	14.20	821	8.15
Banswara	420	86.70	64	13.30	484	4.92
Barmer	308	90.22	33	9.78	341	3.54
Churu	230	88.24	30	11.72	260	3.16
Combined	1662	87.75	244	12.25	1906	5.01

* This percentages have been calculated from gross cropped area

Note : Figures in brackets refer to percentage to total

One of the main reasons for subsistence pattern of cropping and crop culture was the different level of irrigation development in these drought prone areas. Most of the cereals and pulses area was unirrigated. It means in the drought prone villages of Rajasthan the food-grains cultivation was mostly unirrigated and dry. Since non-food crops can hardly be grown on unirrigated land, naturally some of the cultivated area on which non-food crops were cultivation was bound to be mostly irrigated.

The above analysis showed that whatever quantity of irrigation water was available in the sample villages of Rajasthan that was mainly used to irrigate non-food crops. It is also evident that more the district was drought prone and scarce in irrigation water, more it was using water for irrigating non-food crops like is the case with sample villages of Barmer district.

2.5 Drought and Crop Cultivation

The occurrance of drought during the year 1979 and its impact over crop cultivation was also investigated in the sample villages belonging to four selected districts. An assessment of the impact of drought over net area sown and the type of crops effected was made (Table 2.5). On an average 85.88 per cent cropped area was affected by the drought of 1979 in the villages of four districts taken

together. The impact of drought was so intense that it affected 94.74 per cent of total cropped area in the villages of Barmer followed by 84.63 per cent, 84.14 per cent and 82.23 per cent in Churu, Banswara and Ajmer districts respectively. Most of the crops like wheat, jowar, barley, pulses, etc. and all other cash crops were destroyed partially or completely.

Table 2.5 : *Impac of Drought on Net Area Sown and Major Crops*

(Acres)

Particulars	Ajmer	Banswara	Barmer	Churu	Combined
Last Drought Year	1979	1979	1979	1979	1979
Net Area Sown	7617 (100.0)	5732 (100.0)	4923 (100.0)	4719 (100.0)	22991 (100.0)
Net Area Sown Affected by Drought	6263 (82.23)	4823 (84.14)	4664 (94.74)	3994 (84.63)	19744 (85.88)
Major Crops Affected	Wheat, Barley, Jowar, Gram, Oilseeds, Pulses, Potato, Rose, Sugar-cane, Tobacco	Wheat, Barley, Jowar, Gram, Oilseeds, Pulses, Potato, Sugar-cane, Tobacco	Wheat, Barley, Jowar, Gram, Oilseeds, Pulses	Wheat, Barley, Jowar, Gram, Pulses, Oilseeds, Potato, Sugar-cane	Wheat, Barley, Jowar, Gram, Pulses, Oilseeds, Potato, Sugar-cane, Tobacco, Rose

Note : Figures in brackets refer to percentage to total.

2.6 Irrigation Facilities

The development of irrigation in the drought prone areas is constrained because of scanty and erratic nature of rainfall, geo-physical constraints and resource availability. Its limitation was also reflected in the aggregative data of the sample villages in the selected drought prone districts (Table 2.6). Out of gross cultivated area, only 16.03 per cent was irrigated in the four districts combined. Maximum 20.03 per cent of gross cropped area was found to be irrigated in Ajmer followed by 16.92 per cent in Banswara. 12.63 per cent in Barmer and 14.15 per cent in Churu District. It is also evident that these drought prone villages were largely dependent on traditional sources of irrigation. Out of total irrigated area, 64.82 per cent was irrigated through traditional sources like well and persian wheels (Rahats). Maximum dependency over these traditional sources of irrigation was found in Barmer as 72.72 per cent of gross cropped area was irrigated by these sources followed by 69.03 per cent in Banswara, 61.32 per cent in Churu and 53.68 per cent in Ajmer districts. Rest of the gross cropped area was irrigated by pump sets, the only modern source of irrigation. Thus the pumpsets were found to be the second important source of irrigation, irrigating 46.32 per cent, 36.68 per cent, 30.97 pr cent and 27.73 per cent in the villages of Ajmer, Churu, Banswara and Barmer districts respectively. In this way 35.18 per cent of gross cropped area was irrigated by pumpsets at the combined level of all

villages. The pumpsets were classified into two categories from the view point of ownership status of user (i) pumpsets onwed; and (ii) pumpsets hired. The area irrigated by the

Table 2.6 : *Irrigated Area and Sources of Irrigation in Sample Villages*

(Acres)

Particulars	Ajmer	Banswara	Barmer	Churu	Combined
Gross Irrigated Area	2018	1663	1217	1163	6051
Percentage of Gross Irrigated Area to Area Sown	20.03	16.92	12.63	14,15	16.03
Sources of Irrigation:					
a) Well/Persian Wheel	1083 (53.68)	1148 (69.03)	880 (72.27)	713 (61.32)	3922 (64.82)
b) Pump Set Owned	708 (35.07)	235 (14.16)	294 (24.16)	403 (34.63)	1634 (27.00)
c) Pump Set Hired	227 (11.25)	280 (16.81)	43 (3.57)	47 (4.05)	495 (8.18)

Note : Figures in brackets refer to percentage of total

pumpsets owned was found to much higher in all the villages of sample districts except in Banswara where irrigation by hired pumpsets was higher than owned pumpsets. No irrigation through the state tubewells or minor irrigation sources or schemes and natural sources like river, etc. was found in our sample villages.

2.7 Industrial Activities

Cottage and village industries had been one of the major production activities at the household level in village India. However, in course of time, these activities faced competition from the urban based technologically superior industries. As a result the process of extinction of these traditional activities was set in which is continuous till today. But in backward and underdeveloped areas like the drought prone areas, these traditional household based

Table 2.7 : *Number of Industrial Units*

Industrial Units	Ajmer	Banswara	Barmer	Churu	Combined
Flour Mill	9	11	6	12	38
Handloom	2	-	-	-	2
Sugarcane crusher	7	5	-	5	17
Ghani (Traditional Oil expeller)	2	1	-	3	6
Saw Mill	1	1	-	1	3
Basket Making	1	2	3	1	7
Tailoring	7	11	8	8	34
Blacksmithy	6	17	9	11	43
Carpentry	9	13	12	17	51
Others (Kumhar, Shoes making, etc.)	10	12	14	13	49
All	54	73	32	71	250

industrial units still predominate simply because these activities are family and agricultural needs based. In our sample villages, the traditional household based industrial units like carpentry, blacksmithy, tailoring, pottry and shoe making were the major industrial activities (Table 2.7).

Flour mills were also operating in all the villages of Ajmer, Banswara, Barmer and Churu districts. Only 2 handloom units were operating in Delwara village of Ajmer district. Sugar-cane crushers were also there in every village except the Tiraura and Nedalia villages of Ajmer district, Salia, Pindarma, Bodla and Shamagara villages of Banswara district and Depalsor, Gajsar, Lakhan and Rampura villages of Churu district. There was no sugarcane crusher in any of the villages of Barmer district. Thus, it is evident that in the sample villages only traditional household needs based industrial activities were being carried out. No large, medium or small scale industrial units were found there.

2.8 Drinking Water

Availability of safe water for domestic consumption is one of the major difficulties in drought prone areas in general and in their rural areas in specific. This problem becomes more acute in villages when there is limited or no rainfall with little resources to fight it back.

The people in rural areas, by and large, depend upon traditional sources of water, i.e. well. This source of drinking water itself is subject to the erratic mansoon and availability of ground water which is generally found in limited quantum, that too, at deep stratum below the surface. Our sample villages had 113 drinking water wells in total. Maximum number of wells (35) was found distributed among nine villages of Banswara followed by (30) Ajmer, (27) Churu and (21) Barmer districts. There were 102 privately owned hand pumps in the four districts combined. Each of these hand pumps were utilized by owner households. Maximum number of hand pumps owned (36) were found in Ajmer followed by (29) Banswara, (23) Churu and (14) Barmer districts. There were 57 community hand pumps in all the sample villages of four districts which were in working order since last 3 years. Out of these, maximum (21) were in Ajmer followed by (16) in Banswara, (14) in Churu and (6) in Barmer district.

These drought prone villages were also provided drinking water in mobile tankers by the State Government. Yearly frequency of supply was taken into account to assess the water supply through this system in a year. The supply frequencies of these tankers were quite insufficient. Maximum frequency of supply i.e. 127 times in a year was found in the villages of Banswara district followed by 78 times in case of Barmer, 45 times in Ajmer and the minimum frequency of 38 times in the villages of Churu district. Pond water was also used for domestic purposes in case of few

villages. 5 ponds were used (2 in Salia, 2 in Pindarma and 1 in Gopinath ka Gada villages) in Banswara district followed by 2 ponds in Ajmer district (1 each in Tilonia and Aou villages) and 1 in Churu district (Dhirdeshwar Purohitan village). No village was reported to be utilizing pond water in Barmer district.

Table 2.8 : *Sources of Drinking Water*

(Number)

Sources	Ajmer	Banswara	Barmer	Churu	Combined
Masonery Well	30	35	21	27	113
Hand Pumps owned*	36	29	14	23	102
Community Handpumps**	21	16	6	14	57
Supply through Special Vans	45	127	78	38	288
Ponds	2	5	-	1	8

* Those lying defunct since last 3 years are not included.
** Frequency of distribution in a year.

The above analysis indicated that the drought prone villages of Rajasthan mainly depend upon the traditional and natural sources of drinking water and thus the availability of safe and potable drinking water was a serious problem in such areas.

2.9 Infrastructural Facilities[1,2]

The accessibility to various infrastructural facilities within a reasonable distance is one of the parameters for measurement of development in an area. It is evident that 61.11 per cent villages were directly linked with kuchcha road and 41.67 per cent with pucca road (Table 2.9). Majority of villages i.e. 83.33 per cent had the facility of primary school located in the village itself and rest were located at a distance of 1 to 3 kms. away. No higher education institution like High School, College was located in the sample villages. In most of cases, they were located at a distance of more than 3 kms. The Degree Colleges were located beyond the distance of 9 kms. and above from all the sample villages.

The Primary Health Centres (PHCs) were located at a distance of more than 3 kms. from the sample villages except in case of 4 villages (the Nedalia village of Ajmer district, Shamagara and Sunderpur villages of Banswara district and Gudan and Dhirdeshwar purohitan villages of Churu district). The Teu village of Churu district was the only sample village where the facility of primary health centry was in the village. The family welfare centres were mostly located at a distance of more than 3 kms. in case of all sample villages. The Veterinary centres were located at a distance of more than 3 kms. in case of half of the sample villages and rest were at a distance of 9 kms.

Only 19.44 per cent villages were availing the facility of Post Office located within the villages. Majority of Telegraph Offices were located at a distance of more than 3 kms. and remaining at a distance of more than 9 kms. Around half of the villages had bus-stand facility within the distance of 3 kms. Little less than 90 per cent villages were located at a distance of more than 6 kms. from the nearest Railway Station and Bank. Only 36.12 per cent villages were having the facility of fair price shop located within the village. The 38.89 per cent villages were located at a distance of 1 to 3 kms. and remaining between 3 to 6 kms. away from the fair price shops.

Table 2.9 : *Classification of Sample Villages According to Their Distance from Various Infrastructural Facilities*

Facilities	Distance in Kms.						
	In the Village	Upto 1	1-3	3-6	6-9	9+	Total
Kachcha Road	22 (61.11)	6 (16.67)	5 (13.89)	2 (5.55)	1 (2.78)	-	36 (100.0)
Pucca Road	15 (41.67)	4 (11.11)	9 (25.00)	6 (16.67)	2 (5.55)	-	36 (100.0)
Primary School	30 (83.33)	-	6 (16.67)	-	-	-	36 (100.0)
Junior High School	-	3 (8.33)	6 (16.67)	14 (38.89)	10 (27.78)	3 (8.33)	36 (100.0)
High School	-	1 (2.78)	4 (11.11)	10 (27.78)	9 (25.00)	12 (33.33)	36 (100.0)

Table 2.9 (contd...)

Facilities	Distance in Kms.						
	In the Village	Upto 1	1-3	3-6	6-9	9+	Total
Intermediate College	-	-	1 (2.78)	5 (13.89)	9 (25.00)	21 (58.33)	36 (100.0)
Degree College	-	-	-	-	-	36 (100.0)	36 (100.0)
Primary Health Centre	1 (2.78)	-	4 (11.11)	11 (30.56)	5 (13.88)	15 (41.67)	36 (100.0)
Family Welfare Centre	-	1 (2.78)	6 (16.67)	10 (27.78)	5 (13.88)	14 (38.89)	36 (100.0)
Allopathic Dispensary/Hospital	-	1 (2.78)	5 (13.88)	15 (41.67)	6 (16.67)	9 (25.00)	36 (100.0)
Veterinary Centre/ Hospital (AI Centre)	1 (2.78)	-	1 (2.78)	6 (16.67)	10 (27.77)	18 (50.00)	36 (100.0)
Stockman Centre (AI Sub-Centre)	2 (5.55)	2 (5.55)	4 (11.11)	8 (22.23)	8 (22.23)	12 (33.33)	36 (100.0)
Post Office	7 (19.44)	2 (5.55)	10 (27.78)	8 (22.23)	7 (19.45)	2 (5.55)	36 (100.0)
Telegraph Office	-	-	2 (5.55)	9 (25.00)	7 (19.45)	18 (50.00)	36 (100.0)
Seed Store	2 (5.55)	2 (5.55)	5 (13.88)	11 (30.56)	7 (19.45)	9 (25.00)	36 (100.0)
Fertilizer Store	1 (2.78)	1 (2.78)	5 (13.88)	12 (33.33)	10 (27.77)	7 (19.46)	36 (100.0)
Bus Stand	12 (33.33)	7 (19.45)	8 (22.22)	6 (16.67)	3 (8.33)	-	36 (100.0)
Railway Station	-	-	2 (5.56)	3 (8.33)	10 (27.78)	21 (58.33)	36 (100.0)
Bank	-	-	2 (5.56)	5 (13.88)	10 (27.78)	19 (52.79)	36 (100.0)
Fair Price Shop	13 (36.12)	2 (2.55)	14 (38.89)	5 (13.89)	2 (2.55)	-	36 (100.0)

Note : Figures in brackets refer to percentage to total.

The above locational analysis of sample villages from various infrastructural facilities indicated that villagers had to travel for more than 6 kms. to avail these facilities. Hence, it is apparent that the accessibility to the infrastructural facilities within a reasonable distance was not easy in the drought prone areas of Rajasthan.

2.9.1 Infrastructural Facilities in the Sample Villages of Ajmer District

Distance-wise availability of various infrastructural facilities to the villages of Ajmer district indicated that little over 50 per cent villages were connected with kuchcha or pucca road and remaining were located at a distance of 1 to 9 kms. (Table 2.9A). Primary schools were located in 66.67 per cent villages and children of the remaining villages had to travel for atleast 1 to 3 kms. to attend primary schools. Higher education institutions were located at a distance of more than 9 kms. from sample villages. Location-wise, health facilities were also quite remote. Majority of these facilities were located at a distance of 3 kms. or more. Similar situation was found in case of seed, fertilizer stores, post and telegraph services. In majority of cases, Banks and Railway Stations were located at a distance of more than 6 kms. Only 33.33 per cent villages were availing fair price shop facility in the village. All this shows poor accessibility of people to the infrastructural facilities in the sample villages of Ajmer district.

Table 2.9A : *Classification of Villages of Ajmer District According to Their Distance From Various Infrastructural Facilities*

Facilities	Distance in Kms.						
	In the Village	Upto 1	1-3	3-6	6-9	9+	Total
Kachcha Road	6 (66.67)	-	3 (33.33)	-	-	-	9 (100.0)
Pucca Road	5 (55.56)	-	1 (11.11)	2 (22.22)	1 (11.11)	-	9 (100.0)
Primary School	6 (66.67)	-	3 (33.33)	-	-	-	9 (100.0)
Junior High School	-	1 (11.11)	3 (33.33)	1 (11.11)	3 (33.33)	1 (11.11)	9 (100.0)
High School	-	-	3 (33.33)	1 (11.11)	2 (22.22)	3 (33.33)	9 (100.0)
Intermediate College	-	-	1 (11.11)	1 (11.11)	2 (22.22)	5 (55.56)	9 (100.0)
Degree College	-	-	-	-	-	9 (100.0)	9 (100.0)
Primary Health Centre	-	-	1 (11.11)	3 (33.33)	1 (11.11)	4 (44.45)	9 (100.0)
Family Welfare Centre	-	-	1 (11.11)	4 (44.45)	2 (22.22)	2 (22.22)	9 (100.0)
Allopathic Dispensary/Hospital	-	1 (11.11)	1 (11.11)	5 (55.56)	1 (11.11)	1 (11.11)	9 (100.0)
Veterinary Centre/ Hospital (AI Centre)	-	-	1 (11.11)	3 (33.33)	1 (11.11)	4 (44.45)	9 (100.0)
Stockman Centre (AI Sub-Centre)	-	1 (11.11)	2 (22.22)	1 (11.11)	2 (22.22)	3 (33.33)	9 (100.0)
Post Office	1 (11.11)	1 (11.11)	2 (22.22)	1 (11.11)	4 (44.44)	-	9 (100.0)

Table 2.9A (contd...)

Facilities	Distance in Kms.						
	In the Village	Upto 1	1-3	3-6	6-9	9+	Total
Telegraph Office	-	-	-	3 (33.33)	2 (22.22)	4 (44.45)	9 (100.0)
Seed Store	-	1 (11.11)	1 (11.11)	3 (33.33)	2 (22.22)	2 (22.22)	9 (100.0)
Fertilizer Store	-	1 (11.11)	1 (11.11)	3 (33.34)	3 (33.33)	1 (11.11)	9 (100,0)
Bus Stand	3 (33.33)	3 (33.33)	1 (11.11)	1 (11.11)	1 (11.11)	-	9 (100.0)
Railway Station	-	-	1 (11.11)	-	3 (33.33)	5 (55,56)	9 (100.0)
Bank	-	-	1 (11.11)	1 (11.11)	1 (11,11)	6 (66.67)	9 (100.0)
Fair Price Shop	3 (33.33)	1 (11.11)	4 (44.45)	1 (11.11)	-	-	9 (100.0)

Note : Figures in brackets refer to percentage to total.

2.9.2 Infrastructural Facilities in Sample Villages of Banswara District

Distance-wise accessibility of various infrastructural facilities in the selected villages of Banswara district showed that little over 50 per cent and 33 per cent villages were connected with Kuchacha and pucca roads respectively. Primary schools were located in all the sample villages (Table 2.9B). Most of higher educational institutions were located at a distance of more than 6 kms. All the degree

Table 2.9B : *Classification of Villages of Banswara District According to Their Distance From Various Infrastructural Facilities*

Facilities	Distance in Kms.						
	In the Village	Upto 1	1-3	3-6	6-9	9+	Total
Kachcha Road	5 (55.56)	3 (33.33)	1 (11.11)	-	-	-	9 (100.0)
Pucca Road	3 (33.33)	-	3 (33.33)	2 (22.22)	1 (11.11)	-	9 (100.0)
Primary School	9 (100.0)	-	-	-	-	-	9 (100.0)
Junior High School	-	2 (22.22)	1 (11.11)	4 (44.44)	1 (11.11)	1 (11.11)	9 (100.0)
High School	-	1 (11.11)	-	3 (33.33)	2 (22.22)	3 (33.33)	9 (100.0)
Intermediate College	-	-	-	2 (22.22)	2 (22.22)	5 (55.56)	9 (100.0)
Degree College	-	-	-	-	-	9 (100.0)	9 (100.0)
Primary Health Centre	-	-	1 (11.11)	3 (33.33)	1 (11.11)	4 (44.44)	9 (100.0)
Family Welfare Centre	-	-	1 (11.11)	3 (33.33)	-	5 (55.56)	9 (100.0)
Allopathic Dispensary/Hospital	-	-	1 (11.11)	4 (44.44)	1 (11.11)	3 (33.33)	9 (100.0)
Veterinary Centre/ Hospital (AI Centre)	-	-	-	1 (11.11)	3 (33.33)	5 (55.56)	9 (100.0)
Stockman Centre (AI Sub-Centre)	1 (11.11)	-	1 (11.11)	3 (33.33)	1 (11.11)	3 (33.33)	9 (100.0)
Post Office	3 (33.33)	-	2 (22.22)	1 (11.11)	1 (11.11)	2 (22.22)	9 (100.0)
Telegraph Office	-	-	-	2 (22.22)	3 (33.33)	4 (44.44)	9 (100.0)

Table 2.9B (contd...)

Facilities	Distance in Kms.						
	In the Village	Upto 1	1-3	3-6	6-9	9+	Total
Seed Store	1 (11.11)	-	2 (22.22)	2 (22.22)	1 (11.11)	3 (33.33)	9 (100.0)
Fertilizer Store	1 (11.11)	-	2 (22.22)	3 (33.33)	2 (22.22)	1 (11.11)	9 (100.0)
Bus Stand	3 (33.33)	-	4 (44.44)	1 (11.11)	1 (11.11)	-	9 (100.0)
Railway Station	-	-	-	-	1 (11.11)	8 (88.89)	9 (100.0)
Bank	-	-	-	1 (11.11)	3 (33.33)	5 (55.56)	9 (100.0)
Fair Price Shop	4 (44.45)	-	2 (22.22)	2 (22.22)	1 (11.11)	-	9 (100.0)

Note : Figures in brackets refer to percentage to total.

colleges were located at a distance of more than 9 kms. from the sample villages. Health facilities were also located at a distance of more than 3 kms. in majority of cases. Similar locational situation was existing in case of seed, fertilizer store, post and telegraph offices, bank and fair price shops. Thus in the sample villages of Banswara district most of the infrastructural facilities were available at substantial distance from the respective villages.

2.9.3 Infrastructural Facilities in Sample Villages of Barmer District

The sample villages of Barmer district had relatively poor accessibility to various infrastructural facilities as reflected from the village data (Table 2.9C). In all, 77.78 per cent villages were connected with Kuchacha road and only 22.22 per cent with pucca road. Primary Schools were functioning in 77.78 per cent villages. Majority of Higher educational institutions were located at a distance of more than 6 kms. The health facilities were located at a distance

Table 2.9C : *Classification of Villages of Barmer District According to Their Distance From Various Infrastructural Facilities*

Facilities	Distance in Kms.						
	In the Village	Upto 1	1-3	3-6	6-9	9+	Total
Kachcha Road	7 (77.78)	-	2 (22.22)	-	-	-	9 (100.0)
Pucca Road	2 (22.22)	1 (11.11)	2 (22.22)	3 (33.33)	1 (11.11)	-	9 (100.0)
Primary School	7 (77.78)	-	2 (22.22)	-	-	-	9 (100.0)
Junior High School	-	-	1 (11.11)	5 (55.56)	3 (33.33)	-	9 (100.0)
High School	-	-	-	3 (33.33)	4 (44.44)	2 (22.22)	9 (100.0)
Intermediate College	-	-	-	1 (11.11)	3 (33.33)	5 (55.56)	9 (100.0)

Table 2.9C (contd...)

Facilities	Distance in Kms.						
	In the Village	Upto 1	1-3	3-6	6-9	9+	Total
Degree College	-	-	-	-	-	9 (100.0)	9 (100.0)
Primary Health Centre	-	-	1 (11.11)	3 (33.33)	1 (11.11)	4 (44.44)	9 (100.0)
Family Welfare Centre	-	1 (11.11)	2 (22.22)	2 (22.22)	1 (11.11)	3 (33.33)	9 (100.0)
Allopathic Dispensary/Hospital	-	-	2 (22.22)	4 (44.44)	2 (22.22)	1 (11.11)	9 (100.0)
Veterinary Centre/ Hospital (AI Centre)	-	-	-	-	4 (44.44)	5 (55.56)	9 (100.0)
Stockman Centre (AI Sub-Centre)	-	1 (11.11)	1 (11.11)	3 (33.33)	2 (22.22)	2 (22.22)	9 (100.0)
Post Office	-	1 (11.11)	4 (44.44)	3 (33.33)	1 (11.11)	-	9 (100.0)
Telegraph Office	-	-	1 (11.11)	2 (22.22)	1 (11.11)	5 (55.56)	9 (100.0)
Seed Store	-	1 (11.11)	1 (11.11)	4 (44.44)	2 (22.22)	1 (11.11)	9 (100.0)
Fertilizer Store	-	-	1 (11.11)	4 (44.44)	3 (33.33)	1 (11.11)	9 (100.0)
Bus Stand	2 (22.22)	1 (11.11)	2 (22.22)	3 (33.33)	1 (11.11)	-	9 (100.0)
Railway Station	-	-	-	2 (22.22)	3 (33.33)	4 (44.44)	9 (100.0)
Bank	-	-	-	2 (22.22)	3 (33.33)	4 (44.45)	9 (100.0)
Fair Price Shop	3 (33.33)	1 (11.11)	4 (44.44)	1 (11.11)	-	-	9 (100.0)

Note : Figures in brackets refer to percentage to total.

of more than 6 kms. in most of cases. Similar distance was found in case of seed, fertilizer store, post and telegraph services. The Bank and Railway Station were located at a distance of more than 6 kms. from the sample villages. Of the total sample villages, 33 per cent of them had fair price shops. The above locational analysis clearly showed that in case of various infrastructural facilities these villages of Banswara district were more inaccessible and deprived as compared to the villages of other sample districts of Rajasthan.

2.9.4 Infrastructural Facilities in Sample Villages of Churu District

Distance-wise availability of various infrastructural facilities in the villages of Churu district was more or less similar to that of other districts (Table 2.9D). Around 50 per cent villages were connected with Kachcha or pucca road. Primary schools were located in 89 per cent villages. Majority of higher educational institutions were located at a distance of more than 6 kms. from the sample villages. The health facilities were found located at a distance of more than 6 kms. Similar situation was observed in case of seed, fertilizer store and post and telegraph services. In majority of cases, Bank and Railway Station were located at a distance of more than 6 kms. Fair price shops were located in 33 per cent villages. Thus, the poor accessibility of

infrastructural facilities to the sample villages of Churu district was one of the features of backwardness of the drought prone areas of Rajasthan.

The overall locational pattern of most of the infrastructural facilities in the sample drought prone villages of Rajasthan indicated difficult accessibility of villabes to these facilities. In certain cases, villagers had to traverse a distance of more than 6 kms. to avail the urgently required services.

Table 2.9D : *Classification of Villages of Churu District According to their Distance From Various Infrastructural Facilities*

Facilities	Distance in Kms.						
	In the Village	Upto 1	1-3	3-6	6-9	9+	Total
Kachcha Road	5 (55.56)	3 (33.33)	1 (11.11)	-	-	-	9 (100.0)
Pucca Road	4 (44.44)	3 (33.33)	1 (11.11)	1 (11.11)	-	-	9 (100.0)
Primary School	8 (88.88)	-	1 (11.11)	-	-	-	9 (100.0)
Junior High School	-	-	1 (11.11)	4 (44.44)	3 (33.33)	1 (11.11)	9 (100.0)
High School	-	-	-	2 (22.22)	3 (33.33)	4 (44.44)	9 (100.0)
Intermediate College	-	-	-	1 (11.11)	3 (33.33)	5 (55.56)	9 (100.0)
Degree College	-	-	-	-	-	9 (100.0)	9 (100.0)

Table 2.9D (contd...)

Facilities	Distance in Kms.						
	In the Village	Upto 1	1-3	3-6	6-9	9+	Total
Primary Health Centre	1 (11.11)	-	1 (11.11)	2 (22.22)	2 (22.22)	3 (33.33)	9 (100.0)
Family Welfare Centre	-	-	2 (22.22)	1 (11.11)	2 (22.22)	4 (44.44)	9 (100.0)
Allopathic Dispensary/Hospital	-	-	1 (11.11)	2 (22.22)	2 (22.22)	4 (44.44)	9 (100.0)
Veterinary Centre/ Hospital(AI Centre)	1 (11.11)	-	-	2 (22.22)	2 (22.22)	4 (44.44)	9 (100.0)
Stockman Centre (AI Sub-Centre)	1 (11.11)	-	-	1 (11.11)	3 (33.33)	4 (44.44)	9 (100.0)
Post Office	3 (33.33)	-	2 (22.22)	3 (33.33)	1 (11.11)		9 (100.0)
Telegraph Office	-	-	1 (11.11)	2 (22.22)	1 (11.11)	5 (55.55)	9 (100.0)
Seed Store	1 (11.11)	-	1 (11.11)	2 (22.22)	2 (22.22)	3 (33.33)	9 (100.0)
Fertilizer Store	-	-	1 (11.11)	2 (22.22)	2 (22.22)	4 (44.44)	9 (100.0)
Bus Stand	4 (44.44)	3 (33.33)	1 (11.11)	1 (11.11)	-	-	9 (100.0)
Railway Station	-	-	1 (11.11)	1 (11.11)	3 (33.33)	4 (44.44)	9 (100.0)
Bank	-	-	1 (11.11)	1 (11.11)	3 (33.33)	4 (44.44)	9 (100.0)
Fair Price Shop	3 (33.33)	-	4 (44.44)	1 (11.11)	1 (11.11)	-	9 (100.0)

Note : Figures in brackets refer to percentage to total.

2.10 Summary

The above discussion showed that the village people of drought prone areas of Rajasthan relied mostly on agriculture for livelihood. The scheduled castes and scheduled tribes population was substantial and the literacy level was found to be low. The geo-physical conditions have put deterrance on the large scale use of land areas for agricultural purpose. The significantly large part of reporting area was barren and uncultivable. The situation of low cropping intensity prevailed in these sample villages. The skewed pattern of land ownership was evident. The absence of assured irrigation facilities coupled with recurring droughts, the cropping pattern remained confined to only food and subsistence crops. Even the pulses were grown only on 4 per cent of the total cultivated area. Similarly, the cultivation of non-food crops was insignificant though mostly on irrigated tracts of land. The occurance of drought in these areas affected agriculture very severely. All the cultivated crops were badly damaged except the irrigated one. The impact of drought on the agriculture of those villages was more marked where irrigation facilities were relatively less available. The agriculture of our sample villages was largely dependent upon the traditional sources of irrigation.

It was evident that the traditional household needs based industrial activities were being carried out in sample villages. Not a single modern industries of any type was located in these villages.

The availability of safe drinking water is essential for the subsistence of human being. However, it was reported that the people of these villages mostly depended on the natural and traditional sources of drinking water like wells and ponds etc. The hand pumps which are regarded as safe source of drinking were found to be limited in numbers and that too owned by few people of the villages. The rainfed features of drinking water might be causing sever scarcity and hardships to the people of these villages especially at the time of drought.

The people of our sample villages were found not to have easy accessibility to various important infrastructural facilities like education, medical, seed, fertilizer stores, transport and communications.

On the whole it became apparent that the sample villages were backward and underdeveloped with no opportunities of income and employment other than agriculture though agriculture itself was at the very subsistence level. Most of the important facilities required for development of any area were either at all absent or too scarce to give any boost to economy of these villages. As a result people were facing hardships of varying forms.

CHAPTER III

DEMOGRAPHIC AND OCCUPATIONAL STRUCTURE OF SAMPLE HOUSEHOLDS

The socio-economic development of an area is primarily based on the availability of raw materials, capital, power, market, machinery and equipment, entrepreneurial ability and technical and skilled manpower. These determinants could broadly be grouped under three heads : human, physical and financial. Of these, the human resource is considered to be the most crucial because of its being the basic ingredient of soil and atmosphere in which development has to take place. Despite the availability of inexhaustible natural resources, the area can not make rapid strides towards social and economic advancement unless human resources are there to mobilise, organise and harness other resources for the production of goods and services. Keeping this observation in view, the qualitative and quantitative aspects of sample households in terms of sex-ratio, age-groups, literacy, labour-force, activity status, occupational structure, employment pattern and migration are analysed in this chapter. While presenting the findings, district-wise households have been pooled together to arrive at situation emerging at the level of four sample districts, viz., Ajmer, Banswara, Barmer and Churu.

3.1 Population and Sex Ratio

Four drought prone districts of Rajasthan namely Ajmer, Banswara, Barmer and Churu were selected. Out of total 1359 households [personally interviewed] 365, 334, 383, 277 households were distributed among the 36 villages of four districts respectively (Table 3.1). The sample included 8622 population consisting of 2278, 2133, 2367 and 1844 from the four districts respectively. The average size of household in four districts taken together was 6.34 persons. It varied marginally in between four districts. The sex-ratio, i.e., females per thousand males for all the four districts combined was 912. Banswara was found to be the only district where female population exceeded the male.

Table 3.1 : *Population, Average Family Size and Sex Ratio*

Particulars	Ajmer	Banswara	Barmer	Churu	Combined
No. of Households	365	334	383	277	1359
Total Population	2278	2133	2367	1844	8622
Male	1222	1062	1257	969	4510
Female	1056	1071	1110	875	4112
Average Size of Family	6.24	6.39	6.18	6.66	6.34
Sex Ratio	864	1008	883	903	912

3.2 Age Structure

The age structure of sample population showed that 12.79 per cent of total population was of older generation, i.e. the population in the age group of 59 years and above in all the four sample districts. Looking at each district separately, the representation of older group was highest in Ajmer district, i.e. 14.92 per cent and lowest i,e. 10.14 per cent in Barmer district. The proportion of working population (i.e. the population in the age group of 15 years to 59 years) was 45.76 per cent at the aggregate level. The share of this category of population in total population of each district was found to be more or less the same (Table 3.2). The population in the age group of 5 years to 15 years

Table 3.2 : *Classification of Population According to the Different Age Groups*

Age Groups (Years)	Ajmer	Banswara	Barmer	Churu	Combined
Below 5	323 (14.18)	275 (12.89)	367 (15.50)	277 (15.02)	1242 (14.41)
5 - 15	564 (24.76)	590 (27.66)	675 (28.52)	503 (27.28)	2332 (27.04)
15 - 59	1051 (46.14)	955 (44.77)	1085 (45.84)	854 (46.31)	3945 (45.76)
59 & Above	340 (14.92)	313 (14.68)	240 (10.14)	210 (11.39)	1103 (12.79)
Total	2278 (100.00)	2133 (100.00)	2367 (100.00)	1844 (100.00)	8622 (100.00)

Note : Figures in brackets refer to percentage to total.

constituted 27.04 per cent followed by the population of 5 years and below. Its percentage in total population was 14.41 per cent in all the four districts combined. The proportionate share of population in different age groups did not present any substantial variation at inter-district level.

3.3 Literacy and Education

The proportion of illiterates among the total population of four districts was 72.41 per cent. The largest number of illiterates, i.e. 80.44 per cent were found to be in the Barmer district and lowest, i.e. 74.87 per cent were found to be in Ajmer district. The position of illiteracy in Banswara district (74.87 per cent) and Churu district (67.68 per cent) was in between Ajmer and Barmer districts (Table 3.3). Hence, out of total 27.59 per cent literates in the four districts combined, the largest number (34.42 per cent) of literates were found in Ajmer followed by Churu (32.32 per cent), Banswara (25.13 per cent) and (19.56 per cent) Barmer districts. The 16.03 per cent of the total population in our sample districts was educated upto the Primary level, i.e. upto Vth standard. It is important to observe here that the district of Ajmer had lowest proportion of literates (those who can read and write only) in total population as compared to other three districts. Though Ajmer had highest share of total literates (population having all types of educational

levels). The higher drop-outs in Banswara, Barmer and Churu districts as compared to Ajmer district may be one of the reasons for such situation. This observation gets support from the fact that the share of population with educational level of V and IX standards and technically/professionally qualified population was found much higher in Ajmer district as against other three districts. On the whole, the level of

Table 3.3 : *Distribution of Population According to Different Levels of Education*

Educational Level	Ajmer	Banswara	Barmer	Churu	Combined
Illiterate	1494 (65.58)	1597 (74.87)	1904 (80.44)	1248 (67.68)	6243 (72.41)
Literate	65 (2.85)	77 (3.61)	161 (6.80)	87 (4.72)	390 (4.52)
Upto Class V	379 (16.64)	393 (18.42)	261 (11.03)	349 (18.93)	1382 (16.03)
Class V - IX	149 (6.54)	38 (1.78)	25 (1.06)	76 (4.12)	288 (3.34)
High School and Intermediate	28 (1.23)	12 (0.56)	4 (0.17)	63 (3.42)	107 (1.24)
Graduate & Above	21 (0.93)	4 (0.19)	1 (0.04)	19 (1.03)	45 (0.52)
Technical/ Professional	142 (6.23)	12 (0.57)	11 (0.46)	2 (0.10)	167 (1.94)
Total Literates	784 (34.42)	536 (25.13)	463 (19.56)	596 (32.32)	2379 (27.59)
Total Population	2278 (100.00)	2133 (100.00)	2367 (100.00)	1844 (100.00)	8622 (100.00)

Note : Figures in brackets refer to percentage to total.

literacy was found to be low in all the sample districts particularly in the districts of Banswara and Barmer.

3.4 Activity Status of the Population

Activity status of the sample households showed that out of the total population (8622) in four districts combined, 44.76 per cent population was working and engaged in different activities (Table 3.4). Looking at district-wise share of workers, Banswara had 46.93 per cent working population as compared to 44.69 per cent, 43.18 per cent and 44.36 per cent in Ajmer, Barmer and Churu districts respectively. Hence the percentage of working population did not demonstrate much variation at the inter-district levels. Unemployed population was only 0.56 per cent in all the four districts combined. The highest, i.e. 0.92 per cent population was unemployed in Ajmer. Barmer district had lowest proportion of unemployed population, i.e. 0.30 per cent. In all the four districts taken together, 27.55 per cent population was of children below the age of 5 years. The largest number of children population was found to be in Barmer district (31.81 per cent) followed by Ajmer (24.63 per cent), Churu (27.11 per cent) and Banswara (26.30 per cent). The data did not demonstrate much disparity in the inter-activity status of the population in between four sample districts.

Table 3.4 : *Activity Status-wise Distribution of Population*

Particulars	Ajmer	Banswara	Barmer	Churu	Combined
Child	561 (24.63)	561 (26.30)	753 (31.81)	500 (27.11)	2375 (27.55)
Student	287 (12.60)	291 (13.64)	225 (9.50)	286 (15.51)	1089 (12.63)
Working	1018 (44.69)	1001 (46.93)	1022 (43.18)	818 (44.36)	3859 (44.76)
Unemployed	21 (0.92)	14 (0.66)	7 (0.30)	6 (0.33)	48 (0.56)
Housewife	215 (9.44)	97 (4.55)	195 (8.24)	170 (9.22)	677 (7.85)
Retired/Disabled	176 (7.72)	169 (7.92)	165 (6.97)	64 (3.47)	574 (6.65)
Total Population	2278 (100.00)	2133 (100.00)	2367 (100.00)	1844 (100.00)	8622 (100.00)

Note : Figures in brackets refer to percentage to total.

3.5 Occupational Characteristics

The occupational distribution of workers clearly showed that the economy of sample households in all the four districts depended mainly on agriculture for employment (Table 3.5). In all the four districts considered together, 83.49 per cent of the total working population was engaged in agriculture either as main or secondary occupation. Out of these, 77.32 per cent were engaged as cultivators and 6.17 per cent as agricultural labourers. It showed that among all

Table 3.5 : *Occupational Distribution of Workers*

Occupational Groups	Ajmer	Banswara	Barmer	Churu	Combined
Cultivators	620 (60.90)	810 (80.92)	895 (87.58)	659 (80.56)	2984 (77.32)
Agricultural Labour	110 (10.81)	66 (6.59)	21 (2.05)	41 (5.01)	238 (6.17)
Non-Agricultural Labour	85 (8.35)	42 (4.19)	46 (4.50)	40 (4.89)	213 (5.52)
Dairy and other Allied activities	54 (5.30)	9 (0.90)	12 (1.17)	10 (1.22)	85 (2.20)
Business	25 (2.46)	13 (1.30)	3 (0.29)	13 (1.59)	54 (1.40)
Household Industry	15 (1.47)	10 (1.00)	7 (0.68)	3 (0.37)	35 (0.91)
Construction	7 (0.69)	-	1 (0.10)	1 (0.12)	9 (0.23)
Transport	-	-	1 (0.10)	2 (0.24)	3 (0.08)
Service	88 (8.64)	39 (3.90)	25 (2.45)	35 (4.28)	187 (4.85)
Others	14 (1.38)	12 (1.20)	11 (1.08)	14 (1.72)	51 (1.32)
Total Workers	1018 (100.00)	1001 (100.00)	1022 (100.00)	818 (100.00)	3859 (100.00)

Note : Figures in brackets refer to percentage to total.

the four sample districts, the number of workers engaged in agriculture as cultivators was highest whereas the number of agricultural labourers was lowest. The situation can be inferred of the fact that the practice of self cultivation

rather than engaging hired labour was a dominant agrarian characteristics of sample households in each of the selected districts. However, this tendency was more prevalent in the district of Barmer. Such phenomenon may itself be the outcome of subsistence nature of agricultural development of drought prone areas of Rajasthan.

The non-agricultural workers constituted 16.51 per cent of total workforce in all the four districts combined. Out of these 5.52 per cent were engaged as non-agricultural labour followed by 4.85 per cent in service.

The workers engaged in other sectors were few as dairy provided employment to only 2.20 per cent of total workers followed by business (1.40 per cent), households industry (0.91 per cent), construction (0.23 per cent), transport (0.08 per cent) and other activities which engaged only 1.32 per cent of remaining workers.

The service sector which was third next important after agriculture provided employment to around 5 per cent of total workers in all the districts combined.

The inter-district analysis showed that the district of Ajmer had highest proportion of its workers employed in service sector after agriculture. This can be attributed to the fact already emerged from earlier analysis that the level of education was found to be higher in Ajmer district as compared to other sample districts.

3.6 Employment in Agriculture

In this section employment in agriculture has been considered as consisting of cultivators and agricultural labourers. The total number of 3859 workers were found in sample population. Out of these total workers, 3222 workers, i.e. 83.49 per cent were engaged in agriculture as cultivators and agricultural labourers (Table 3.6).

Out of the total employed workers in agriculture, around 12 per cent got employment upto 50 days, 37 per cent remained employed for 50 to 100 days, 26 per cent had employment of 100 to 150 days, 13 per cent of them got employment of 150 to 200 days. Only few of them, constituting 6 per cent and 7 per cent, got employment of 200-250 days and 250 days and above respectively in our aggregate sample. Hence it can be inferred that under employment was the notable feature of large section of workers engaged in agriculture which was lead sector of the drought prone areas of Rajasthan. The district-wise data showed that the proportion of workers getting employment in agriculture for lesser period (less than 50 days, 50 to 100 days and 100 to 150 days) were more from the Barmer and Churu districts as against Ajmer and Banswara districts. Unlikely, the proportions of workers getting longer duration of employment (150 to 200 days, 200 to 250 days and 250 days and above) were found to be lower in case of Barmer and Churu districts in comparison with Ajmer and Banswara districts. Hence the problem of under-

employment and unemployment of workers engaged in agriculture seems to be more acute in the districts of Barmer and Churu as compared with Ajmer and Banswara districts.

Table 3.6 : *Employment Pattern of Agricultural Workers : According to the Farm Size Groups*

(Number)

Employment Days/ Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Less Than 50 Days								
Ajmer	-	15	33	35	15	3	5	106
Banswara	7	37	53	26	5	7	-	135
Barmer	5	-	-	5	3	2	5	20
Churu	2	-	3	3	16	56	33	113
Combined	14	52	89	69	39	68	43	374
50 - 100 Days								
Ajmer	7	10	68	42	41	38	16	222
Banswara	14	43	117	85	60	29	14	362
Barmer	46	12	11	40	22	35	86	252
Churu	10	2	7	22	78	121	111	351
Combined	77	67	203	189	201	223	227	1187
100 - 150 Days								
Ajmer	14	13	31	27	23	16	4	128
Banswara	12	18	51	21	23	13	-	138
Barmer	70	12	28	99	56	58	115	438
Churu	6	-	1	1	29	32	52	121
Combined	102	43	111	148	131	119	171	825
150 - 200 Days								
Ajmer	21	12	29	27	16	16	9	130
Banswara	3	13	33	37	23	10	-	119
Barmer	10	2	1	5	2	15	54	89
Churu	12	-	2	3	13	26	32	88
Combined	46	27	65	72	54	67	95	426

Table 3.6 (Contd...)

Employment Days/ Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
200 - 250 Days								
Ajmer	15	-	7	5	5	13	7	52
Banswara	-	8	9	24	19	1	-	61
Barmer	6	6	-	6	-	8	27	53
Churu	1	-	-	-	1	6	4	12
Combined	22	14	16	35	25	28	38	178
250 Days & Above								
Ajmer	10	2	16	22	31	8	3	92
Banswara	1	-	18	19	17	6	-	61
Barmer	4	1	-	-	2	6	49	64
Churu	-	-	-	-	2	4	9	15
Combined	15	3	34	43	52	24	61	232
Total								
Ajmer	67	52	184	158	131	94	44	730
Banswara	37	119	281	212	147	66	14	876
Barmer	141	33	40	157	85	124	336	916
Churu	31	2	13	29	139	245	241	700
Combined	276	206	518	556	502	529	635	3222
Average Employment Days (Per Worker)								
Ajmer	109.91	95.05	119.85	128.30	156.02	148.35	144.54	127.72
Banswara	100.00	81.91	103.65	123.33	146.51	151.87	120.46	118.25
Barmer	90.28	80.20	100.00	110.38	120.45	125.72	110.39	105.36
Churu	134.16	100.00	90.00	89.10	102.97	120.78	113.77	107.25
Combined	106.59	89.33	102.37	111.77	131.45	135.65	121.20	112.54

The data of employment days were further tabulated to find out average employment days in agricultural sector in a year. It appeared that on an average agricultural workers got employment for 112.54 days in a year in sample districts combined together. The largest average employment days were found in Ajmer, i.e. 127.72 days followed by Banswara (118.25 days), Churu (107.25 days) and Barmer (105.36 days).

The landless agricultural labourers got employment in agriculture sector for 106.59 days in a year. Looking at the employment days of agricultural labourers, highest employment, i.e. for 134.16 days in a year was found in Churu and the lowest 90.28 days in Barmer district. Other two districts viz. Ajmer and Barmer provided employment for 109.91 and 100 days in a year to the landless agricultural labourers respectively.

Among the land owning groups, those having 10 to 15 acres of land, remained engaged for the maximum period of 135.65 days. The next were those who owned 7.50 to 10 acres of land and remained engaged for 131.45 days in a year. In the four districts combined, those getting employment for minimum 89.33 days in a year were the owners of less than 2.5 acres of land. Those owning 2.5 to 5 acres of land were in slightly better position as they remained employed for 102.37 days in a year. Thus the above analysis showed that the majority of workforce remained unemployed for large number of days in a year irrespective of their land size.

3.7 Employment in Activities Other Than Agriculture

Out of total sample population in four districts combined, 44.76 per cent were workers. Out of total workers 83.49 per cent were engaged in agriculture as discussed earlier. Remaining 16.51 per cent workers were engaged in activities other than agriculture. Looking at the proportion of workers district-wise, the largest percentage, i.e. 45.21 belonged to district of Ajmer. The share of other districts were 19.62 per cent, 18.53 per cent and 16.64 per cent in Banswara, Churu and Barmer districts respectively.

Those engaged in non-agricultural sector, 21.19 per cent owned no land and majority of them got employment for 150 to 250 days in a year. Among the land owning non-agricultural workers, maximum, i.e. 21.51 per cent were owning land of 2.5 to 5 acres and 3.61 per cent of those owning 15 acres and more land. The data showed that those workers who were engaged in non-agricultural work owned lesser size of land holding.

In the four districts combined, average employment days per workers were 254.16 days in a year. Thus it reflected that non-agricultural sector provided more employment days as compared to the agricultural sector despite the fact that majority of workers depended on agriculture for employment. In the non-agricultural sector, landless workers remained employed for 250.19 days in a year which were around twice of

the days their counterparts remained employed in agriculture sector. The availability of lesser number of employment days in agriculture as compared to non-agriculture sector seems to be the outcome of recurring droughts which the agriculture of drought prone areas faces in Rajasthan.

Table 3.7 : *Employment Pattern of Workers Other Than Agriculture : According to the Farm Size Groups*

(Number)

Employment Days/ Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Less Than 50 Days								
Ajmer	-	-	-	1	4	-	-	5
Banswara	-	-	-	1	-	-	-	1
Barmer	1	-	-	-	-	-	-	1
Churu	-	-	-	1	2	-	-	3
Combined	1	-	-	3	6	-	-	10
50 - 100 Days								
Ajmer	2	2	2	4	-	1	-	11
Banswara	2	3	1	3	-	-	-	9
Barmer	3	-	-	2	-	-	1	6
Churu	1	-	-	1	-	-	-	2
Combined	8	5	3	10	-	1	1	28
100 - 150 Days								
Ajmer	8	1	3	1	-	-	-	13
Banswara	-	2	2	-	2	-	-	6
Barmer	8	-	1	3	-	2	-	14
Churu	-	-	-	1	1	-	-	2
Combined	16	3	6	5	3	2	-	35

Table 3.7 (Contd...)

Employment Days/ Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
150 - 200 Days								
Ajmer	8	8	15	5	-	-	-	36
Banswara	2	5	8	9	-	-	-	24
Barmer	3	-	-	-	-	1	-	4
Churu	9	10	10	12	10	-	-	51
Combined	22	23	33	26	10	1	-	115
200 - 250 Days								
Ajmer	9	8	20	3	-	5	-	45
Banswara	2	2	9	2	2	-	-	17
Barmer	10	-	2	4	-	2	3	21
Churu	7	-	-	-	6	1	-	14
Combined	28	10	31	9	8	8	3	97
250 Days & Above								
Ajmer	31	50	35	30	20	12	-	178
Banswara	3	10	21	14	14	6	-	68
Barmer	15	-	7	6	5	15	12	60
Churu	11	-	1	8	13	6	7	46
Combined	60	60	64	58	52	39	19	352
Total								
Ajmer	58	69	75	44	24	18	-	288
Banswara	9	22	41	29	18	6	-	125
Barmer	40	-	10	15	5	20	16	106
Churu	28	10	11	23	32	7	7	118
Combined	135	101	137	111	79	51	23	637
Average Employment Days (Per Worker)								
Ajmer	253.05	282.36	265.50	271.50	240.36	299:29	-	230.30
Banswara	283.33	227.73	258.47	217.88	258.46	313.33	-	220.74
Barmer	241.75	-	267.78	230.00	332.00	288.00	294.05	200.94
Churu	258.61	250.61	288.91	186.87	252.66	340.00	330.00	270.50
Combined	250.19	190.18	210.16	225.50	269.87	294.16	310.03	254.16

3.8 Employment in All Activities

After looking at the employment pattern in agricultural and non-agricultural sectors separately, it was thought to glance over the employment pattern of all the activities combined. There were 3859 total workers in our sample of four drought prone districts. The highest representation was from Barmer district (26.48 per cent) followed by Ajmer (26.38 per cent), Banswara (25.94 per cent) and Churu (21.20 per cent) (Table 3.8). The table shows that little over 50 per cent workforce got employment ranging between 50 to 150 days in a year. Apart from this, 9.95 per cent remained employed for less than 50 days in a year, reflecting the severity of unemployment problem in drought areas of the state. Only 15.13 per cent workforce remained employed for 250 days or more.

In the four districts combined, average employment days per workers were 168.70 in a year. The maximum number of 188 days of employment was found to be available in Churu district while the minimum number of 143 days of employment could be available in the Barmer district. The situation in Ajmer and Banswara districts was in between of two districts of Churu and Barmer.

Table 3.8 : *Employment Pattern of Workers Engaged in All Activities : According to the Farm Size Groups*

(Number)

Employment Days/ Districts	Land Size Groups (Acres)							
	Land less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Less Than 50 Days								
Ajmer	-	15	33	36	19	3	5	111
Banswara	7	37	53	27	5	7	-	136
Barmer	6	-	-	5	3	2	5	21
Churu	2	-	3	4	18	56	33	116
Combined	15	52	89	72	45	68	43	384
50 - 100 Days								
Ajmer	9	12	70	46	41	39	16	233
Banswara	16	46	118	88	60	29	14	371
Barmer	49	12	11	42	22	35	87	258
Churu	11	2	7	23	78	121	111	353
Combined	85	72	206	199	201	224	228	1215
100 - 150 Days								
Ajmer	22	14	34	28	23	16	4	141
Banswara	12	20	53	21	25	13	-	144
Barmer	78	12	29	102	56	60	115	452
Churu	6	-	1	2	30	32	52	123
Combined	118	46	117	153	134	121	171	860
150 - 200 Days								
Ajmer	29	20	44	32	16	16	9	166
Banswara	5	18	41	46	23	10	-	143
Barmer	13	2	1	5	2	16	54	93
Churu	21	10	12	15	23	26	32	139
Combined	68	50	98	98	64	68	95	541
200 - 250 Days								
Ajmer	24	8	27	8	5	18	7	97
Banswara	2	10	18	26	21	1	-	78
Barmer	16	6	2	10	-	10	30	74
Churu	8	-	-	-	7	7	4	26
Combined	50	24	47	44	33	36	41	275

Table 3.8 (Contd...)

Employment Days/ Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
250 Days & Above								
Ajmer	41	52	51	52	51	20	3	270
Banswara	4	10	39	33	31	12	-	129
Barmer	19	1	7	8	7	21	61	124
Churu	11	-	1	8	15	10	16	61
Combined	75	63	98	101	104	63	80	584
Total								
Ajmer	125	121	259	202	155	112	44	1018
Banswara	46	141	322	241	165	72	14	1001
Barmer	181	33	50	172	90	144	352	1022
Churu	59	12	24	52	171	252	248	818
Combined	411	307	655	667	581	580	658	3859
Average Employment Days (Per Worker)								
Ajmer	177.48	180.71	191.68	190.90	190.98	220.81	72.27	173.64
Banswara	191.67	154.80	181.05	170.60	200.61	231.60	62.23	170.16
Barmer	166.02	40.14	63.89	150.19	201.23	179.86	202.00	142.86
Churu	196.39	170.30	189.46	137.99	230.30	177.88	221.89	188.15
Combined	182.89	136.49	156.52	162.42	205.78	202.54	139.59	168.70

3.9 Temporary Migration

The workers migrating temporarily for seeking employment from their native places constituted only 2.49 per cent of total workforce in the four districts combined (Table 3.9). The data showed that workers migrated temporarily irrespective of their land size in all the districts considered together. However, in Ajmer and Churu districts,

Table 3.9 : *Total Temporary Migrants and Their Place of Migration : According to the Farm Size Groups*

(Number)

Place of Migration/ Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Total Temporary Migrants								
Ajmer	-	-	-	1	2	-	-	3
Banswara	-	11	7	3	3	-	-	24
Barmer	17	3	11	11	-	6	14	62
Churu	-	-	-	2	5	-	-	7
Combined	17	14	18	17	10	6	14	96
Within the State (Rural)								
Ajmer	-	-	-	1	2	-	-	3
Banswara	-	-	-	-	-	-	-	-
Barmer	15	-	8	9	-	4	6	42
Churu	-	-	-	2	2	-	-	4
Combined	15	-	8	12	4	4	6	49
Within the State (Urban)								
Ajmer	-	-	-	-	-	-	-	-
Banswara	-	-	-	-	-	-	-	-
Barmer	-	-	-	-	-	-	4	4
Churu	-	-	-	-	3	-	-	3
Combined	-	-	-	-	3	-	4	7
Outside the State (Rural)								
Ajmer	-	-	-	-	-	-	-	-
Banswara	-	-	-	-	-	-	-	-
Barmer	-	-	-	-	-	-	-	-
Churu	-	-	-	-	-	-	-	-
Combined	-	-	-	-	-	-	-	-
Outside the State (Urban)								
Ajmer	-	-	-	-	-	-	-	-
Banswara	-	11	7	3	3	-	-	24
Barmer	2	3	3	2	-	2	4	16
Churu	-	-	-	-	-	-	-	-
Combined	2	14	10	5	3	2	4	40

temporary migrants belonged to medium size of land holdings. The main characteristic of temporary migrants was that either they migrated in the rural areas within the state or they went in the urban areas of the outside state. Only three cases of Churu district and four cases of Barmer district were reported to have migrated to the urban areas of the same state. Those migrated to urban areas of outside state generally had smaller land size in Banswara and Barmer districts. Not a single worker was found to have migrated to urban areas of outside state in case of Ajmer and Churu districts. Thus, the temporary migrants of sample households migrated to the rural areas of the Rajasthan state and one-third of them went to urban areas of other states to seek temporary employment.

3.10 Activities and Earnings of Temporary Migrants

The temporary migrants were mainly engaged in non-agricultural and construction activities. Some of them were also doing various informal activities like vendoring, rickshaw pulling and tea, pan selling stc. Only three cases were reported to be working as agricultural labourer in Churu district alone (Table 3.10). At the inter-district level, the largest number of temporary migrants working as non-agricultural labour belonged to Barmer district followed by Banswara and Churu districts. Not a single temporary migrant took the job of non-agriculture labour in Ajmer district. In

case of construction activity, none of the temporary migrants were engaged in Ajmer and Churu distircts, irrespective of land size groups.

Table 3.10 : *Activities and Average Earnings of Temporary Migrants : According to the Farm Size Groups*

(Number)

Activities/ Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Agricultural Labour								
Ajmer	-	-	-	-	-	-	-	-
Banswara	-	-	-	-	-	-	-	-
Barmer	-	-	-	-	-	-	-	-
Churu	-	-	-	-	3	-	-	3
Combined	-	-	-	-	3	-	-	3
Non-Agricultural Labour								
Ajmer	-	-	-	-	-	-	-	-
Banswara	-	9	5	-	2	-	-	16
Barmer	14	3	8	11	-	4	6	46
Churu	-	-	-	2	-	-	-	2
Combined	14	12	13	13	2	4	6	64
Construction								
Ajmer	-	-	-	-	-	-	-	-
Banswara	-	-	-	3	1	-	-	4
Barmer	3	-	3	-	-	2	6	14
Churu	-	-	-	-	-	-	-	-
Combined	3	-	3	3	1	2	6	18
Transport								
Ajmer	-	-	-	-	-	-	-	-
Banswara	-	-	-	-	-	-	-	-
Barmer	-	-	-	-	-	-	-	-
Churu	-	-	-	-	-	-	-	-
Combined	-	-	-	-	-	-	-	-

Table 3.10 (Contd...)

Employment Days/ Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Service								
Ajmer	-	-	-	-	-	-	-	-
Banswara	-	-	-	-	-	-	-	-
Barmer	-	-	-	-	-	-	-	-
Churu	-	-	-	-	-	-	-	-
Combined	-	-	-	-	-	-	-	-
Others								
Ajmer	-	-	-	1	2	-	-	3
Banswara	-	2	2	-	-	-	-	4
Barmer	-	-	-	-	-	-	2	2
Churu	-	-	-	-	2	-	-	2
Combined	-	2	2	1	4	-	2	11
Total								
Ajmer	-	-	-	1	2	-	-	3
Banswara	-	11	7	3	3	-	-	24
Barmer	17	3	11	11	-	6	14	62
Churu	-	-	-	2	5	-	-	7
Combined	17	14	18	17	10	6	14	96
Average Earning per Worker								
Ajmer	-	-	-	3600.00	1800.00	-	-	2700.00
Banswara	-	1776.36	5057.14	1900.00	940.00	-	-	2418.00
Barmer	1651.76	2640.00	5721.82	2007.27	-	3103.67	5967.86	3626.00
Churu	-	-	-	4500.00	2736.00	-	-	3618.00
Combined	1651.76	2207.10	5388.90	3001.18	1823.76	3101.85	5967.76	3198.27

district where majority of workers worked as non-agricultural labour or in construction sector. The earnings of these migrants were more or less same in Churu district (Rs.3618) in comparison to their counterparts of Ajmer district. Thus

the earnings of these migrants were found to be very low which indicated the prevalence of low wages in drought prone areas of Rajasthan as most of these migrants remained within the state.

3.11 Permanent Migrants and Their Educational Status

Of the total workforce, 4.98 per cent constituted the permanent migrants in the sample population. The educational level of permanent migrants was found to be better in case of sample households combined. Out of total permanent migrants in four districts, 60.34 per cent was found to be educated upto IXth standard, 15.63 per cent upto Intermediate and 8.85 per cent with Graduates and above qualifications. Remaining 14.58 per cent migrant workers were illiterates. The level of education and size of land owned was observed to be directly related in case of these migrants of each of the four sample districts.

3.12 Place of Permanent Migration

The largest number of these migrants, i.e. 88 which constituted 45.83 per cent of total permanent migrants in the sample migrated to the urban areas of Rajasthan. Next were the 84 migrants, i.e. 43.75 per cent of all permanent migrants who went to the rural areas of other states. Only 5.73 per cent migrated to other rural areas of their own

Table 3.11 : *Total Permanent Migrants and Their Educational Level : According to the Farm Size Groups*

(Number)

Educational Level/ Districts	Land Size Groups (Acres)							
	Land less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Total Migrants								
Ajmer	4	3	11	3	13	3	-	37
Banswara	-	6	8	5	4	-	-	23
Barmer	6	3	9	9	10	15	12	64
Churu	3	-	2	2	13	23	25	68
Combined	13	12	30	19	40	41	37	192
Illiterates								
Ajmer	-	-	-	-	-	-	-	-
Banswara	-	6	3	3	-	-	-	12
Barmer	-	-	4	2	-	-	4	10
Churu	1	-	1	-	2	-	2	6
Combined	1	6	8	5	2	-	6	28
Upto IX Standard								
Ajmer	4	3	11	1	1	3	-	23
Banswara	-	-	5	2	2	-	-	9
Barmer	3	-	4	5	7	11	8	38
Churu	2	-	1	2	10	16	16	47
Combined	9	3	21	10	20	30	24	117
High School & Intermediate								
Ajmer	-	-	-	-	-	-	-	-
Banswara	-	-	-	-	2	-	-	2
Barmer	1	3	-	2	3	4	-	13
Churu	-	-	-	-	1	7	7	15
Combined	1	3	-	2	6	11	7	30
Graduate & Above								
Ajmer	-	-	-	2	12	-	-	14
Banswara	-	-	-	-	-	-	-	-
Barmer	2	-	1	-	-	-	-	3
Churu	-	-	-	-	-	-	-	-
Combined	2	-	1	2	12	-	-	17

Table 3.12 : *Total Permanent Migrants and Their Place of Migration : According to the Farm Size Groups*

(Number)

Place of Migration/ Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Within the State (Rural)								
Ajmer	-	-	-	-	-	-	-	-
Banswara	-	-	-	-	-	-	-	-
Barmer	2	-	-	-	2	2	5	11
Churu	-	-	-	-	-	-	-	-
Combined	2	-	-	-	2	2	5	11
Within the State (Urban)								
Ajmer	2	3	6	2	13	3	-	29
Banswara	-	-	2	-	2	-	-	4
Barmer	4	1	6	2	4	9	6	32
Churu	2	-	2	1	3	13	2	23
Combined	8	4	16	5	22	25	8	88
Outside the State (Rural)								
Ajmer	2	-	5	1	-	-	-	8
Banswara	-	6	6	5	2	-	-	19
Barmer	-	2	3	7	4	4	1	21
Churu	1	-	-	1	10	8	16	36
Combined	3	8	14	14	16	12	17	84
Outside the State (Urban)								
Ajmer	-	-	-	-	-	-	-	-
Banswara	-	-	-	-	-	-	-	-
Barmer	-	-	-	-	-	-	-	-
Churu	-	-	-	-	-	2	7	9
Combined	-	-	-	-	-	2	7	9

state. The permanent migration from the drought prone areas of Rajasthan to the urban areas of other states was found to be relatively low as only 4.69 per cent of these migrants went to these areas. The data indicated that those migrating permanently in rural or urban areas of Rajasthan state or to the rural and urban parts of other states were generally the owner of large size of holdings.

3.13 Employment of Permanent Migrants

Out of total 192 permanent migrants from the sample drought prone districts, maximum 29.16 per cent worked in service sector followed by 18.23 per cent as non-agricultural labour, 14.06 per cent as agricultural labourers, 11.46 per cent construction workers, 9.90 per cent in business, 7.29 per cent in transport and 9.90 per cent in other sectors. The permanent migrants working as agricultural labour and non-agricultural labour mostly belonged to the Barmer and Churu districts and generally had varying land size. In case of business and construction activities, most of the permanent migrants from Barmer and Churu districts were engaged. Most of permanent migrants of Ajmer, Churu and Barmer got employment in service sector. In service sector the employed migrants had generally large size of holdings.

Table 3.13 : *Permanent Migrants Employed in Different Activities : According to the Farm Size Groups*

(Number)

Activities/ Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Agricultural Labour								
Ajmer	-	-	-	-	-	-	-	-
Banswara	-	1	-	-	-	-	-	1
Barmer	2	2	3	2	-	2	2	13
Churu	1	-	-	-	2	4	6	13
Combined	3	3	3	2	2	6	8	27
Non-Agricultural Labour								
Ajmer	-	-	3	-	2	-	-	5
Banswara	-	1	-	2	2	-	-	5
Barmer	3	1	2	2	2	2	1	13
Churu	2	-	1	2	2	3	2	12
Combined	5	2	6	6	8	5	3	35
Business								
Ajmer	-	-	2	-	2	-	-	4
Banswara	-	-	2	1	-	-	-	3
Barmer	1	-	2	1	-	1	1	6
Churu	-	-	-	-	-	2	4	6
Combined	1	-	6	2	2	3	5	19
Transport								
Ajmer	-	3	1	-	2	-	-	6
Banswara	-	-	1	1	-	-	-	2
Barmer	-	-	1	2	-	-	1	4
Churu	-	-	-	-	-	1	1	2
Combined	-	3	3	3	2	1	2	14
Service								
Ajmer	2	-	4	2	5	2	-	15
Banswara	-	2	3	-	2	-	-	7
Barmer	-	-	1	2	4	5	3	15
Churu	-	-	1	-	4	6	8	19
Combined	2	2	9	4	15	13	11	56

Table 3.13 (Contd...)

Activities/ Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Construction								
Ajmer	2	-	1	1	1	1	-	6
Banswara	-	-	1	1	-	-	-	2
Barmer	-	-	-	-	2	1	2	5
Churu	-	-	-	-	3	5	1	9
Combined	2	-	2	2	6	7	3	22
Others								
Ajmer	-	-	-	-	1	-	-	1
Banswara	-	2	1	-	-	-	-	3
Barmer	-	-	-	-	2	4	2	8
Churu	-	-	-	-	2	2	3	7
Combined	-	2	1	-	5	6	5	19

3.14 Permanent Migrants and Earnings

The income data of permanent migrants was classified into five income groups with land holding classification (Table 3.14). It showed that around 21 per cent of total permanent migrants had monthly income of below Rs.150.0, 17 per cent were earning in between Rs.150.0 to Rs.300.0, 21 per cent had income of Rs.300.0 to Rs.400.0 per month, 18 per cent earned in between Rs.450.0 to Rs.600.0 per month and the highest proportion of 23 per cent of all permanent migrants were earning monthly income of Rs.600.0 and above. Those who

were found to be in low income range owned smaller size of land in case of each of the four sample districts.

The average yearly income per permanent migrants was calculated to be Rs.2544.0 at the aggregate level. The permanent migrants belonging to Ajmer district earned highest average annual income of Rs.3052.0 followed by the income of Rs.2473.0, Rs.2353.0 and Rs.2294.0 earned by the permanent migrants of Banswara, Barmer and Churu districts respectively.

The type of activity in which permanent migrants were engaged and income which they earned determined the level of remittances which they sent back to their families in their respective district. The data indicated that the average remittances per year was highest in case of Ajmer (Rs.3052), followed by Banswara (Rs.2472), Barmer (Rs.2353) and Churu (Rs.2294). On the whole permanent migrants sent back Rs.2544 in a year from the place of migration to their native place.

The size of agricultural land they owned seemed to have played a significant role as the amount of remittances was generally found to be positively related with the size of land owned by these permanent migrants.

Table 3.14 : *Classification of Permanent Migrants in Different Income Groups and Their Average Remittances per Year : According to the Farm Size Groups*

(Number)

Remittances (Rs.)/ Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Below Rs.150								
Ajmer	-	-	2	2	4	-	-	8
Banswara	-	3	1	-	-	-	-	4
Barmer	1	-	-	-	9	2	4	16
Churu	-	-	-	-	2	5	5	12
Combined	1	3	3	2	15	7	9	40
Rs.150 - 300								
Ajmer	2	-	3	-	2	-	-	7
Banswara	-	3	-	-	2	-	-	5
Barmer	-	1	-	-	-	3	2	6
Churu	-	-	-	-	5	6	3	14
Combined	2	4	3	-	9	9	5	32
Rs.300 - 450								
Ajmer	2	3	3	-	2	-	-	10
Banswara	-	-	-	-	-	-	-	-
Barmer	-	-	8	5	1	4	-	18
Churu	2	-	-	-	2	5	3	12
Combined	4	3	11	5	5	9	3	40
Rs.450 - 600								
Ajmer	-	-	1	1	-	-	-	2
Banswara	-	-	2	2	-	-	-	4
Barmer	3	-	1	2	-	4	6	16
Churu	-	-	1	1	1	4	6	13
Combined	3	-	5	6	1	8	12	35
Rs.600 & Above								
Ajmer	-	-	2	-	5	3	-	10
Banswara	-	-	5	3	2	-	-	10
Barmer	2	2	-	2	-	2	-	8
Churu	1	-	-	1	4	3	8	17
Combined	3	2	7	6	11	8	8	45

Table 3.14 (Contd...)

Remittances/ Districts	Land Size Groups (Acres)							
	Land-less	< 2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Average Remittances per year								
Ajmer	1150.00	500.00	2460.00	3400.00	6000.00	4800.00	-	3051.67
Banswara	-	50.00	3500.00	1690.00	4650.00	-	-	2472.50
Barmer	3600.00	2800.00	1684.44	2000.00	2460.00	2286.67	1640.00	2353.01
Churu	400.00	-	1200.00	2100.00	2276.92	2747.83	5040.00	2294.13
Combined	1717.00	1116.67	2211.00	2297.50	3846.73	3278.17	3340.00	2543.80

3.15 Summary

The demographic characteristics of sample households indicated the average size of household to be 6.34 persons. The sex ratio was 912 females per thousand males except the case of Banswara district where the females population exceeded the males population. The analysis of age composition of population showed the proportion of working population to be around 46 per cent generally in case of each sample districts of Ajmer, Banswara, Barmer and Churu.

The level of illiteracy was found to quite high as around 72 per cent of total population was found to be illiterate. The problem of illiteracy among the population of Barmer, Banswara and Churu was quite serious.

The occupational distribution of workers showed that the economy of sample households in all the four districts depended mainly on agriculture as 83 per cent of total population was engaged in agriculture for employment and income. The non-agricultural, service and other sectors provided employment to remaining population.

Though the agriculture emerged to be the most important source of livilihood of large majority of our sample population but it provided employment upto 150 days to large majority of agricultural workers, consisting of cultivators and agricultural labourers. The problem was found to be relatively more in agriculturally backward district like the Barmer. Hence the problem of underemployment of large number of agricultural workers was the dominant feature of agrarian economy of drought prone areas of Rajasthan. The data regarding the employment of non-agricultural workers showed that the non-agricultural sector provided more days of employment as compared to the agricultural sector. On the whole, the analysis indicated that the general employment days per worker, irrespective of type of the activity, were 169 days in a year. It showed that the working population remained unemployed for more than half of the year in the drought prone areas of Rajasthan.

On account of low level of agricultural development and non-availability of other employment opportunities, the characteristics of migrant workers were examined. The data

showed that roughly 2-3 per cent of total workers migrated temporarily. The main characteristic of temporary migrants was that either they migrated in the rural areas of Rajasthan or they migrated in the urban areas of other states. The temporary migrants were found to be engaged mainly in non-agricultural and construction works. On an average, these migrants earned an income of Rs.3200.0 in a year. Some of the workers migrated permanently. The share of such workers was around 5 per cent of total population. In case of permanent migrants, migration to urban areas and that too within the state of Rajasthan was found to be one of the important characteristics of permanent migrants. The education level and land owned was observed to be directly related in case of permanent migrants. The type of activity in which permanent migrants were engaged and income which they earned determined the level of remittances which they sent back to their families. The average yearly income per permanent migrants was calculated to be Rs.2544.0

On the whole, the low literacy level, high dependency on agriculture for employment, high degree of under-employment particularly in dominant agricultural sector, relatively low migration of workers from these areas and hence low income level are the major demographic and occupational features of sample drought prone districts of Rajasthan.

CHAPTER IV

AGRICULTURAL ECONOMY OF THE SAMPLE DISTRICTS

The data analysed in the previous chapter indicated agriculture to be the main source of employment and income in the sample drought prone districts of Rajasthan. It is therefore pertinent to examine the various facets of agriculture in case of sample households of selected districts. In this chapter, an attempt has been made to examine the agricultural economy of sample households of selected districts of Ajmer, Banswara, Barmer and Churu, on the basis of primary information.

4.1 Land Relations

Land is the basic source of agricultural production and its allied activities. The land distribution pattern (owned or operated) has infallible impact on the agricultural economy. The analysis of data of land owned, leased-in, leased-out and land operated indicated a skewed pattern of distribution in sample households of selected districts (Table 4.1). It is evident that the landless households of Ajmer district did not leased-in and hence had no operated area. Of the total area leased-in by all class of farmers,

Table 4.1 : *Distribution of Owned, Operated, Leased-in and Leased-Out Area : According to the Farm Size Groups*

(Percentage)

Area/District	Land Size Groups (Acres)							
	Land less	< 2.5	2.5 - 5.0	5.0 - 7.5	7.5 - 10.0	10.0 - 15.0	15 & Above	Total
Area Owned								
Ajmer	-	1.49	20.55	31.28	2.89	32.23	11.56	100.00
Banswara	-	1.43	14.32	32.94	37.62	13.69	-	100.00
Barmer	-	0.02	3.80	11.30	32.08	19.01	33.79	100.00
Churu	-	0.12	2.28	19.03	16.35	61.49	0.73	100.00
Combined	-	0.82	10.82	23.57	24.80	25.76	14.23	100.00
Area Leased-in								
Ajmer	-	3.80	53.16	43.04	-	-	-	100.00
Banswara	98.81	0.30	0.69	0.20	-	-	-	100.00
Barmer	4.35	-	-	-	-	6.95	88.70	100.00
Churu	48.01	4.02	-	33.63	12.52	1.82	-	100.00
Combined	24.91	1.47	3.43	12.86	3.77	4.40	49.16	100.00
Area Leased-Out								
Ajmer	-	0.21	25.40	14.92	59.47	-	-	100.00
Banswara	-	4.36	16.64	5.97	24.50	48.53	-	100.00
Barmer	-	-	-	-	-	14.44	85.56	100.00
Churu	-	-	1.22	-	38.53	56.27	3.98	100.00
Combined	-	1.12	6.81	2.82	23.33	34.64	31.28	100.00
Operated Area								
Ajmer	-	1.54	20.67	31.82	1.33	32.85	11.79	100.00
Banswara	0.80	1.24	14.05	34.41	38.15	11.35	-	100.00
Barmer	0.21	0.02	3.90	11.64	33.25	18.78	32.38	100.00
Churu	3.80	0.45	2.32	24.14	11.44	57.85	-	100.00
Combined	0.74	0.81	10.91	24.83	24.29	24.44	13.98	100.00

Note : Operated Area = Owned area - Leased-out area + Leased-in Area

around one-fourth was with the landless households at the aggregate level. The concentration of leased-in land with the landless households was so high that the households of Banswara and Churu districts possessed around 99 per cent and 48 per cent of the total leased-in land of all classes of farmers. The share of landless class of farmers was found to be quite low as they do not owned any land.

The farmers owning land upto 2.5 acres had less than one per cent of total owned area. In case of Ajmer and Banswara districts, these households owned relatively larger share in total owned area. Leasing-in of land by this class of farmers except that of Barmer and leasing-out by the farmers of Banswara district appeared to be the important features. On the whole, operated area owned by this group of farmers also constituted less than one per cent of all area operated.

The households in the land size of 2.5 to 5.0 acres had 11 per cent of the total area in the sample. However, in case of Barmer and Churu districts, this class of cultivators owned 3 to 4 per cent of the total cultivated area. The farmers in this class of land size did not leased-in in Barmer and Churu districts. No land was leased-out by the farmers of this group in Barmer district. Hence at the aggregate sample level, proportion of operated area owned by this class of cultivators was more or less similar to that of their owned land area.

In the land category of 5.00 to 7.50 acres, around 24 per cent of total owned area was concentrated. The share of this group of farmers had been 31 per cent and 33 per cent in Ajmer and Banswara districts respectively. The leasing-in land by the farmers of Barmer district and leasing-out by the households of Barmer and Churu districts was not in practice. The distribution pattern of operated area showed similar trend to that of area owned by this class of farmers.

The households owning land 7.5 acres and above had around 65 per cent of owned area, 57 per cent of leased-in area, 89 per cent of leased-out area and 63 per cent of operated area. The households of Ajmer and Banswara district in this class of land size did not leased-in at all.

Hence households owning large-size of holdings controlled substantial part of owned and operated area. The practice of leasing-out of land on the part of large holding households was more dominant as that of leasing-in. The inter-district variations in area owned, leased in and leased-out did not demonstrate much variations.

4.2 Pattern of Land Use

The pattern of land use in any area indicates how the available portion of land, as a natural resource, is being utilised by the people to realise material production in order to satisfy their basic needs. In case of our sample

Table 4.2 : *Distribution of Total Area Under Different Land Uses : According to the Farm Size Groups*

(Percentage)

Land Use/ District	Land less	< 2.5	2.5 - 5.0	5.0 - 7.5	7.5 - 10.0	10.0 - 15.0	15 & Above	Total
Area Under Cultivation								
Ajmer	-	94.97	93.16	84.21	13.26	87.48	70.00	79.34
Banswara	-	100.00	99.73	99.07	97.83	89.62	-	97.52
Barmer	-	66.67	92.67	67.25	91.81	48.22	36.39	63.81
Churu	-	100.00	100.00	95.69	100.00	75.11	18.40	48.82
Combined	-	97.22	95.68	87.25	87.74	69.75	31.00	67.81
Area Under Fallow Land								
Ajmer	-	2.67	2.21	3.18	10.31	0.31	10.53	3.70
Banswara	-	-	0.08	0.40	0.49	3.59	-	0.78
Barmer	-	33.33	2.63	9.74	0.61	13.95	35.23	20.93
Churu	-	-	-	4.31	-	3.05	2.13	2.68
Combined	-	1.65	1.43	3.64	1.40	6.52	27.42	10.49
Area Under Pasture								
Ajmer	-	-	0.17	4.11	26.31	6.55	9.16	6.54
Banswara	-	-	0.19	0.53	1.68	6.80	-	1.70
Barmer	-	-	4.69	23.01	7.41	36.75	27.91	24.81
Churu	-	-	-	-	-	21.79	23.04	46.31
Combined	-	-	0.75	6.32	6.35	21.81	39.15	18.95
Area Under Plantation								
Ajmer	-	1.18	1.46	3.59	26.81	2.67	6.30	5.13
Banswara	-	-	-	-	-	-	-	-
Barmer	-	-	-	-	-	1.07	0.47	0.45
Churu	-	-	-	-	-	-	6.48	2.17
Combined	-	0.57	0.76	1.18	2.45	1.11	2.02	1.60
Area Under Orchard								
Ajmer	-	1.18	2.18	2.99	4.91	23.30	3.00	4.00
Banswara	-	-	-	-	-	-	-	-
Barmer	-	-	-	-	-	-	-	-
Churu	-	-	-	-	-	0.04	0.01	0.02
Combined	-	0.57	1.44	1.61	2.09	0.80	0.41	1.15

households of all the four selected drought prone districts, 67.81 per cent of total land area was utilized for cultivation (Table 4.2). The pattern of land use appeared to be varying across the sample districts. In the Banswara district, 97.52 per cent land area was under cultivation which was found to be highest as compared to other three districts of Ajmer (79.34 per cent), Barmer (63.81 per cent) and Churu (48.82 per cent).

The data showed that area under cultivation was inversely related with land size. The maximum use of land area for cultivation was in the land size of less than 2.5 acres, i.e. 97.22 per cent. It gradually decreased to 31 per cent in case of land size of 15 acres and above.

The area under fallow was 10.49 per cent in all the four districts combined. The maximum area under fallow was found in Barmer district, i.e. 20.97 per cent. The proportions of fallow land were 3.70 per cent, 2.68 per cent and 0.78 per cent in Ajmer, Churu and Banswara districts respectively. Most of the fallow land was in the land category of 10 acres and above. In the Barmer district, the smaller holdings too had substantial share of fallow land.

In the total sample, 18.95 per cent of total area was found to be under pasture. Similarly the area under orchards was also quite less in these districts. In these drought prone districts area under orchards was found to be only 1.15 per cent. No area under orchards was found in the sample

households of Banswara and Barmer districts. Ajmer was the only district where all types of land owners had put some portion of their total land area under orchards. Some orchards area was also found in the land size of 10 acres and above in Churu district.

4.3 Cropping Pattern

The cereals were the major crops in the drought prone districts of Rajasthan which were grown on 90.14 per cent of total cultivated area of all the sample districts combined (Table 4.3). The households owning different land sizes put more than 90 per cent of their total cultivated area under cereals in each of four sample districts with few exception in case of large land owning households in Ajmer, Barmer and Churu districts.

The pulses were grown on 4.49 per cent of cultivated area in the aggregate sample. The Ajmer was the district where pulses cultivation was on 5.96 per cent of area and in the district of Barmer pulses cultivation was comfined to only 3.03 per cent of cultivated area. The pulses cultivation in different land size groups was higher in Ajmer district as compared to the average area under pulses. In case of other districts, the cultivation of pulses was on 3 to 5 per cent of total cultivated area.

Table 4.3 : *Distribution of Cultivated Area Under Cereals, Pulses, Foodgrains and Non-Foodgrains of Sample Households : According to the Farm Size Groups*

(Percentage)

Area/District	Land Size Groups (Acres)						
	Land less	< 2.5	2.5 - 5.0	5.0 - 7.5	7.5 - 10.0	10.0 - 15.0	15 & Above	Total
Area Under Cereals								
Ajmer	-	90.22	87.60	88.98	91.20	90.68	80.39	88.37
Banswara	90.18	90.38	92.10	89.76	92.13	93.69	-	92.36
Barmer	94.21	94.39	95.11	93.76	96.20	94.76	93.38	94.54
Churu	92.38	90.18	96.10	95.78	93.18	90.79	-	93.16
Combined	92.24	91.27	91.73	92.04	93.16	92.38	86.88	90.14
Area Under Pulses								
Ajmer	-	5.38	8.28	5.16	6.70	5.38	5.68	5.96
Banswara	5.02	4.67	3.98	3.28	4.38	4.35	-	4.18
Barmer	3.19	3.76	3.39	1.76	2.12	3.16	3.80	3.03
Churu	2.59	3.67	3.19	2.39	6.02	6.45	-	4.76
Combined	3.60	4.30	4.70	3.15	4.80	4.84	4.70	4.49
Area Under Foodgrains								
Ajmer	-	95.60	95.88	94.14	97.90	96.06	86.07	94.33
Banswara	95.20	95.05	96.08	93.06	96.51	98.04	-	96.54
Barmer	97.40	98.15	98.50	95.52	98.32	97.92	97.18	97.57
Churu	94.97	93.85	99.29	98.17	99.20	97.24	-	97.65
Combined	95.84	95.72	97.40	95.20	97.96	97.30	92.16	96.57
Area Under Non-Foodgrains								
Ajmer	-	4.40	4.12	5.86	2.10	3.94	13.93	5.78
Banswara	4.80	4.95	3.92	6.94	3.49	1.96	-	4.30
Barmer	2.60	1.85	1.50	4.48	1.68	2.08	2.82	2.35
Churu	5.03	6.15	0.71	1.83	0.80	2.76	-	2.80
Combined	4.16	4.26	2.56	4.76	2.01	2.68	8.37	3.48
Total Area								
Ajmer	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Banswara	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Barmer	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Churu	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Combined	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

The subsistence characteristics of agriculture of these areas was evident from the fact that around 97 per cent of total cultivated area was used for foodgrains production. In any of the land size group, foodgrains area was found to be not less than 93 per cent except the land size of 15 acres and above in Ajmer district where foodgrains area was 86 per cent.

Such an extensive cultivation of foodcrops left very little scope for cultivation of non-food crops in the sample districts. We found that only 3.48 per cent of total cultivated area was used for non-food crops cultivation. The situation of Ajmer district in this respect was better as in this district, non-foodcrops were grown on 5.78 per cent of area.

4.4 Extent of Irrigation

The availability of assured irrigation is the most crucial input for successful crop cultivation. The drought prone area are generally at very disadvantageous position in this regard as our primary data indicated (Table 4.4).

Out of the total cultivated area under cereals, only 16.90 per cent was irrigated at the aggregate level of four sample districts. Ajmer and Banswara districts were relatively in better position as 21.34 per cent and 22.47 per cent of their cereals area was irrigated as compared to

Table 4.4 : *Distribution of Irrigated Area Under Cereals, Foodgrains and Non-Foodgrains of Sample Households : According to Farm Size Groups*

(Percentage)

Crops/ District	Land Size Groups (Acres)						
	Land less	< 2.5	2.5 - 5.0	5.0 - 7.5	7.5 - 10.0	10.0 - 15.0	15 & Above	Total
Cereals								
Ajmer	-	-	-	12.87	18.39	29.36	24.73	21.34
Banswara	-	-	-	13.47	20.39	26.71	29.32	22.47
Barmer	-	-	-	6.23	8.01	13.73	15.63	12.38
Churu	-	-	-	9.78	10.38	15.32	16.17	12.91
Combined	-	-	-	10.59	14.29	21.28	21.46	16.90
Pulses								
Ajmer	-	-	-	-	5.21	3.26	8.26	5.58
Banswara	-	-	-	-	-	2.12	-	2.12
Barmer	-	-	-	-	-	-	-	-
Churu	-	-	-	-	-	-	-	-
Combined	-	-	-	-	5.21	2.69	-	3.67
Foodgrains								
Ajmer	-	-	-	12.87	11.80	-	15.63	13.43
Banswara	-	-	-	-	20.39	14.92	13.36	16.22
Barmer	-	-	-	-	-	-	8.63	8.63
Churu	-	-	-	-	10.38	15.32	-	12.85
Combined	-	-	-	12.87	13.59	15.02	12.54	12.83
Non-Foodgrains								
Ajmer	-	-	3.78	56.37	88.20	86.32	92.36	65.40
Banswara	-	-	5.86	-	79.61	85.08	-	56.85
Barmer	-	-	-	87.33	-	-	84.37	86.10
Churu	-	-	8.73	-	89.62	84.68	-	61.01
Combined	-	-	6.12	87.83	86.41	84.95	84.37	69.91
Total								
Ajmer	-	-	100.00	100.00	100.00	100.00	100.00	100.00
Banswara	-	-	100.00	100.00	100.00	100.00	100.00	100.00
Barmer	-	-	-	100.00	100.00	100.00	100.00	100.00
Churu	-	-	100.00	100.00	100.00	100.00	100.00	100.00
Combined	-	-	100.00	100.00	100.00	100.00	100.00	100.00

Barmer and Churu districts which had 12.38 per cent and 12.91 per cent respectively of their cereals area irrigated. The cereals cultivated on the land upto the size of 5.00 acres were totally unirrigated in each of our sample district. In case of land size of 5 acres and above, the level of irrigation was found to be related with the size of land put under cereals cultivation in respect of all of the sample districts.

The irrigation of area under pulses cultivation was quite low. Only 3.67 per cent of area under pulses was found to be irrigated in the sample. Only Ajmer and Banswara had irrigated area under pulses and that to the extent of only 5.58 per cent and 2.21 per cent respectively. In case of these two districts, the land size of 7.5 to 10 and 10 to 15 acres in respect of Ajmer and only 10 to 15 acres in case of Banswara had irrigated area under pulses.

Thus only 12.83 per cent of area under foodgrains was irrigated at the aggregate level. The district-wise extent of irrigation was more or less same as the case was with the cereals irrigation.

The irrigated area of non-food crops was 69.91 per cent in the total sample. It varied from 56.85 per cent in case of Banswara to 86.10 per cent in Barmer district. The data indicated that the district of Barmer which is most deficient in water resources with high drought proneness had highest percentage of non-foodgrains area irrigated among all the

sample district. It seems that the farmers of Barmer district may be cultivating non-foodcrops mostly on assured irrigated land whereas their counterparts in other sample districts may be cultivating some of the non-food crops on rainfed land. In general, the extent of irrigation particularly of foodcrops which were grown on most of the cultivated land was found to be quite low.

4.5 Sources of Irrigation

We have observed that the level of irrigation in the drought prone districts of Rajasthan was quite low. The main cause of low level of irrigation was the lack of substantial development of modern irrigation facilities which can better exploit ground and surface water resources in view of geo-physical constraints of these areas (Table 4.5).

Our sample data on the sources of irrigation across different land size groups indicated that traditional sources of irrigation like well and persian wheel irrigated 64.61 per cent of the total irrigated area in the four districts combined. Looking at district-wise separately, Barmer and Banswara were more dependent over these traditional sources as compared to other two districts. In Ajmer, cultivators were less dependent on traditional sources of irrigation whose share in total irrigation was 51.72 per cent. In Churu district, the irrigation by well/persian wheel was 59.78 per cent of total irrigated area of the district. Looking at

Table 4.5 : *Distribution of Irrigated Area by Sources of Irrigation : According to the Farm Size Groups*

(Percentage)

Source of Irrigation/ District	Land Size Groups (Acres)						
	< 2.5	2.5 - 5.0	5.0 - 7.5	7.5 - 10.0	10.0 - 15.0	15 & Above	Total
Well/Persian Wheel							
Ajmer	-	3.78	8.07	38.79	31.32	18.04	51.72
Banswara	-	5.86	12.73	32.10	26.74	22.57	72.68
Barmer	-	-	35.46	43.73	12.65	8.16	74.27
Churu	-	8.73	9.23	27.98	32.68	21.38	59.78
Combined	-	6.12	16.37	35.65	25.84	17.54	64.61
Pump Set Owned							
Ajmer	-	-	12.87	19.23	28.41	39.49	30.09
Banswara	-	-	-	22.87	33.39	43.74	11.20
Barmer	-	-	-	11.08	21.37	67.55	22.66
Churu	-	-	-	16.31	24.96	58.73	37.05
Combined	-	-	3.22	17.37	27.03	52.38	22.52
Pump Set Hired							
Ajmer	-	-	4.71	12.78	50.45	32.06	18.19
Banswara	-	-	-	8.30	46.99	44.71	16.12
Barmer	-	-	-	3.76	42.38	53.86	3.07
Churu	-	-	-	7.59	45.12	47.29	3.17
Combined	-	-	-	8.11	46.24	45.65	12.87

different land size groups, area irrigated through wells/ persian wheels was largest among those owning land between 7.5 to 15 acres covering little over 60 per cent areas in the four districts combined. Those owning land above 15 acres, irrigated only 17.54 per cent of their total irrigated area in the four districts combined. Thus the fact emerged that : (i) the level of irrigation was very low in small size groups of land holdings; and (ii) the relative dependency of large

size of land holdings over traditional sources of irrigation was comparatively lesser as compared to small holdings in case of our total sample.

Ground water exploited through pump sets owned irrigated 22.52 per cent of the total irrigated area in the four districts combined. Looking at district-wise separately, maximum 37.05 per cent of the total irrigated area was covered through own pump sets in Churu district followed by 30.09 per cent in Ajmer, 22.66 per cent in Barmer and minimum 11.20 per cent in Banswara district. In case of area irrigated by pump sets, maximum 52.38 per cent of the area was irrigated in the land size of 15 acres or more. The data showed a positive relationship between land ownership and area irrigated through owned pumpsets.

Area irrigated through hired pumpsets was found in all the four drought prone districts. On an average 12.87 per cent of the total irrigated area was covered through this source in the four districts combined. Maximum area coverage, i.e. 18.19 per cent through this source was found to be in Ajmer district followed by 16.12 per cent in Banswara district. Other two districts, Churu and Barmer had negligible area of 3.17 per cent and 3.07 per cent respectively irrigated by hired pumpsets. The maximum 10 per cent of the area was found to be irrigated through hired pumpsets in the land group of 10 acres and above.

4.6 Crop Yields

The data analysis of area and production of cereals, pulses and foodgrains indicated that the level of yield per acre was quite low in case of sample districts of Rajasthan (Table 4.6). It is evident that the yield of cereals was only 2.98 quintals per acre at the aggregate level of our sample. No substantial variation reflected at the inter-district and inter-land size groups.

Table 4.6 : *Crop Yields : According to the Farm Size Groups*

(Qtls/Acre)

Crop/District	Land Size Groups (Acres)							
	Land less	< 2.5	2.5 - 5.0	5.0 - 7.5	7.5 - 10.0	10.0 - 15.0	15 & Above	Total
Cereals								
Ajmer	-	2.52	2.54	2.63	2.69	2.72	3.00	2.87
Banswara	3.10	3.23	3.28	3.76	3.98	3.91	-	3.80
Barmer	2.62	2.60	2.58	2.53	2.58	2.54	2.43	2.56
Churu	2.60	2.65	2.68	2.52	2.60	2.64	-	2.69
Combined	2.77	2.75	2.77	2.83	2.96	2.95	2.72	2.98
Pulses								
Ajmer	-	2.10	2.22	2.27	2.28	2.40	2.52	2.38
Banswara	2.71	2.69	2.64	2.70	2.75	2.98	-	2.81
Barmer	2.00	2.01	2.00	2.01	2.01	2.02	2.02	2.02
Churu	2.00	1.98	1.99	2.02	2.01	1.98	-	2.00
Combined	2.24	2.20	2.22	2.24	2.26	2.38	2.28	2.36
Foodgrains								
Ajmer	-	2.31	2.37	2.43	2.50	2.51	2.71	2.64
Banswara	2.91	2.95	2.97	3.21	3.32	3.42	-	3.32
Barmer	2.32	2.29	2.27	2.26	2.25	2.26	2.25	2.30
Churu	2.30	2.32	2.30	2.25	2.28	2.30	-	2.36
Combined	2.53	2.50	2.53	2.58	2.63	2.68	2.52	2.59

The productivity of pulses was also found to be very low, i.e. 2.36 quintals per acre. The Barmer and Churu districts in particular had low productivity of pulses. The productivity variations among different land size groups in case of pulses were also not much evident.

The combined impact of yield of cereals and pulses reflected on the productivity levels of foodgrains. We found a low level of foodgrains productivity at the combined level of all sample districts. The problem of low productivity of foodgrains was found to be particularly acute in the districts of Barmer, Banswara and Churu.

4.7 Output and Sale

As we have seen that the economy of drought prone areas of Rajasthan is primarily agricultural based and foodcrops are grown on most part of the cultivated areas. Hence production and marketing of foodgrains are being examined and analysed here (Table 4.7). The table showed that around 24 per cent of production of foodgrains was left over after meeting all consumption needs at the combined level of all sample districts. However these households were purchasing back around 6 per cent of their foodgrains production from market. Thus the total sample households were selling around 15 per cent of their foodgrains production in the market. The landless category of households who do not owned any land but did cultivation on leased-in land could not have

foodgrains surplus for marketing rather they purchased around 17 per cent of production from market. The households owning land upto 5 acres apparently sold some surplus in the market

Table 4.7 : *Production, Net Marketing Surplus, Repurchases and Sale of Foodgrains : According to the Farm Size Groups*

(Percentage)

Particulars	Land Size Groups (Acres)							
	Land less	< 2.5	2.5 - 5.0	5.0 - 7.5	7.5 - 10.0	10.0 - 15.0	15 & Above	Total
Production								
Ajmer	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Banswara	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Barmer	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Churu	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Combined	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Net Marketing Surplus								
Ajmer	-	-	-	17.34	23.10	41.34	48.29	30.52
Banswara	-	-	-	10.38	11.43	40.00	43.38	25.29
Barmer	-	-	-	-	-	20.59	28.20	24.30
Churu	-	-	-	12.48	10.49	38.96	30.67	21.15
Combined	-	-	-	12.48	15.03	26.76	36.36	24.30
Repurchases								
Ajmer	15.99	7.21	1.34	-	-	-	-	7.20
Banswara	17.99	10.00	0.83	-	-	-	-	8.95
Barmer	18.30	11.30	2.38	0.90	2.33	-	-	6.76
Churu	16.10	8.74	1.56	-	-	-	-	7.60
Combined	16.96	12.42	1.53	0.90	2.33	-	-	7.59
Sale								
Ajmer	-	0.91	1.00	3.45	20.78	27.30	46.10	19.26
Banswara	-	-	1.20	1.39	7.39	28.48	40.28	17.30
Barmer	-	1.23	0.90	-	-	18.00	27.10	10.81
Churu	-	9.83	0.30	1.56	9.38	36.41	29.50	13.29
Combined	-	9.98	0.83	2.10	11.52	21.52	34.65	14.65

but their market dependence for food needs was high enough. So in real sense these households indulged in distress marketing of their foodgrains. Only the households owning land above 10 acres generated real surplus and sold in the market. The overall market participation by the sample households for marketing of foodgrains was found to be relatively low.

4.8 Marketing Pattern

The data on the marketing pattern of different producers were examined and analysed in case of cereals, pulses and foodgrains (Tables 4.8, 4.8A and 4.8B). It reflected that around 18 per cent of marketed surplus of cereals was sold by the sample farmers within the village itself. The remaining 82 per cent was sold outside village in the mandies and to government procurement agencies. We noticed that landless group of cultivators did not market at all as their production on leased-in land fell far short of their consumption requirement. It reflected also that marginal and small cultivators sold larger part of their produce within the village as compared to large group of farmers.

At the inter-district level, the percentage of cereals produce sold within the village was higher in the district of Barmer and Churu as against the districts of Ajmer and Banswara. The cultivators owning land upto 2.5 acres in the

Table 4.8 : *Pattern of Marketing of Cereals : According to the Farm Size Groups*

(Percentage)

Particular	Land Size Groups (Acres)						
	Land less	< 2.5	2.5 - 5.0	5.0 - 7.5	7.5 - 10.0	10.0 - 15.0	15 & Above	Total
Ajmer								
Within Village	-	-	11.94	12.09	12.72	13.78	7.29	12.28
Outside Village	-	-	88.06	87.91	87.28	86.22	92.71	87.72
Total	-	-	100.00	100.00	100.00	100.00	100.00	100.00
Banswara								
Within Village	-	88.27	9.22	8.00	13.16	7.53	-	10.52
Outside Village	-	11.73	90.78	92.00	86.84	92.47	-	89.48
Total		100.00	100.00	100.00	100.00	100.00		100.00
Barmer								
Within Village	-	-	72.72	57.63	52.57	41.59	4.61	29.95
Outside Village	-	-	27.28	42.37	47.43	58.41	95.39	70.05
Total			100.00	100.00	100.00	100.00	100.00	100.00
Churu								
Within Village	-	-	71.05	35.49	33.77	12.49	-	19.37
Outside Village	-	-	28.95	65.51	66.23	87.51	-	80.63
Total	-	-	100.00	100.00	100.00	100.00		100.00
Combined								
Within Village	-	88.27	20.28	16.49	27.57	8.56	5.16	18.28
Outside Village	-	11.73	79.72	83.51	72.43	81.44	94.84	81.72
Total		100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 4.8A : *Pattern of Marketing of Pulses : According to the Farm Size Groups*

(Percentage)

Particular	Land Size Groups (Acres)							
	Land less	< 2.5	2.5 - 5.0	5.0 - 7.5	7.5 - 10.0	10.0 - 15.0	15 & Above	Total
Ajmer								
Within Village	-	-	80.22	37.11	27.00	8.73	9.71	11.46
Outside Village	-	-	19.78	62.89	73.00	91.27	90.29	88.54
Total	-	-	100.00	100.00	100.00	100.00	100.00	100.00
Banswara								
Within Village	-	-	98.71	39.01	23.09	2.72	-	19.67
Outside Village	-	-	1.29	60.99	76.91	97.28	-	80.33
Total	-	-	100.00	100.00	100.00	100.00		100.00
Barmer								
Within Village	-	-	-	-	18.63	11.45	19.20	17.27
Outside Village	-	-	-	-	81.37	88.55	80.80	82.73
Total	-	-	-	-	100.00	100.00	100.00	100.00
Churu								
Within Village	-	-	-	-	22.02	8.12	-	8.85
Outside Village	-	-	-	-	77.98	91.88	-	91.15
Total	-	-	-	-	100.00	100.00	-	100.00
Combined								
Within Village	-	-	86.93	38.09	21.22	8.27	17.45	16.08
Outside Village	-	-	13.07	61.91	78.78	91.73	82.55	83.92
Total	-	-	100.00	100.00	100.00	100.00	100.00	100.00

Table 4.8B : *Pattern of Marketing of Foodgrains : According to the Farm Size Groups*

(Percentage)

Particular	Land Size Groups (Acres)							
	Land less	< 2.5	2.5 - 5.0	5.0 - 7.5	7.5 - 10.0	10.0 - 15.0	15 & Above	Total
Ajmer								
Within Village	-	-	20.30	13.87	39.67	11.03	8.30	11.94
Outside Village	-	-	79.70	86.13	60.33	88.97	91.70	88.06
Total	-	-	100.00	100.00	100.00	100.00	100.00	100.00
Banswara								
Within Village	-	88.27	20.17	9.17	18.21	5.34	-	14.14
Outside Village	-	11.73	79.83	90.83	81.79	94.66	-	85.86
Total	-	100.00	100.00	100.00	100.00	100.00		100.00
Barmer								
Within Village	-	-	72.72	57.63	32.40	25.95	-	23.61
Outside Village	-	-	27.28	42.37	67.60	74.05	-	76.39
Total	-	-	100.00	100.00	100.00	100.00	-	100.00
Churu								
Within Village	-	-	71.05	35.49	30.79	10.38	-	15.06
Outside Village	-	-	28.95	64.51	69.21	89.62	-	84.40
Total	-	-	100.00	100.00	100.00	100.00	-	100.00
Combined								
Within Village	-	88.27	27.34	17.35	24.16	13.35	10.66	17.31
Outside Village	-	11.73	72.66	82.65	75.84	86.65	89.34	82.69
Total	-	100.00	100.00	100.00	100.00	100.00	100.00	100.00

districts of Ajmer, Barmer and Churu were found not selling any part of their cereals produce either within or outside the village. In general the data indicated the inverse relationship between the village sale and size of land holdings owned by the sample households of each of the sample districts with few exceptions.

In case of pulses marketing, producers sold relatively low percentage of their marketed surplus within the village in comparison with cereals surplus. It was 16.08 per cent at the combined level of all the four sample districts. The producers owning land upto 2.5 acres in our sample did not sell their pulses produce. The households having land size of 2.5 to 5.00 acres of Barmer and Churu districts also did not sell their pulses produce. The households with larger land size marketed more of their pulses produce outside the village in each of sample district in respect of pulses marketing also.

The marketing pattern as observed in case of cereals and pulses was also evident in respect of foodgrains marketing. The data showed that around 17 per cent of the total foodgrains surplus was sold within the village by all the sample households. A positive relationship between the within the village sale and land size and no marketing by the landless group of farmers in each sample district and those owning land upto 2.5 acres in the districts of Ajmer, Barmer and Churu are the important features of foodgrains marketing

of our sample households of the selected drought prone districts of Rajasthan.

4.9 Summary

The analysis of data pertaining to land owned, leased-in and leased-out indicated a skewed pattern of distribution in sample households of selected districts. Leasing-in of land by the landless group of households was large enough as this group had 48 per cent of total leased-in area. The large land owning households though small in number has larger share of owned and operated area in each of the sample districts.

The pattern of land use appeared to be varying across the sample districts. The cultivated area as proportion of total area varied from 98 per cent in Banswara district to 48 per cent in Churu district. The area under cultivation was found to be inversly related with land size. The extent of irrigation in agriculture was found to be low. The cereals were the major crops grown in these areas. However, only 17 per cent of the aggregate area under cereals was irrigated. The wells and persian wheels were the main sources of irrigation. The yield levels of different crops particularly of cereals, pulses and foodgrains were quite low.

The agricultural economy of these drought-prone districts was basically subsistence one and sample households marketed small portion for their foodgrains output. The farm

households marketed a major part of their surplus outside their villages mostly in the mandies. They also marketed to the traders within their village.

In general the observed characteristics of the agricultural economy of these sample districts presented a scenario of backwardness and subsistence.

CHAPTER V

INCOME, EXPENDITURE AND LIABILITIES

In this chapter, an attempt has been made to discuss the socio-economic conditions of sample households of the four drought prone districts, viz. Ajmer, Banswara, Barmer and Churu of Rajasthan. The socio-economic conditions are examined on the basis of income they generated, expenses they incurred and the liabilities they owned in terms of loan payments.

The total income of a sample household has been arrived here by taking into account the income from agricultural products and its by-products minus cost of cultivation involved plus the income from non-agricultural work, service, business, household industry and sale proceeds from animal husbandry. The total expenditure is arrived at by adding the expenditure over cereals and other food and non-food items as well as the expenditure incurred on housing, education, religion, litigation, entertainment and social ceremonies and functions. The liabilities of a household are examined in terms of any amount of loan taken by the household for any purpose. Thus, the main feature of income generation, expenditure pattern and liabilities relating to farm households across different land owning groups have been examined in this chapter.

5.1 Per Capita and Per Household Income

In the four drought prone districts, per household yearly income was found to be Rs.7093 through all the income generating activities. Maximum income of Rs.8115 per household was in Ajmer district and minimum Rs.5720 in Barmer district. In the remaining two districts of Banswara and Churu, per household income was Rs.7461 and Rs.7069 respectively (Table 5.1). The data showed that income earned by the landless households and households owning land upto 2.5 acres was roughly half of the income earned by the households of large size holdings. The pattern of income generation at household level also reflected in the per capita annual income. The highest per capita income of Rs.1276 was found in Ajmer district and lowest of Rs.903 in Barmer district. In the remaining two sample districts of Banswara and Churu, the per capita annual income was found to be Rs.1102 and Rs.1115 respectively. Thus, Rs.1119 was the per capita income in the four districts combined. Per capita income of landless and small farm owning households was around half of the income of large farm owning households. The overall pattern of income generation across different land size groups indicated substantial disparity per household and per capita among various land owning groups of rural households of these drought prone district.

Table 5.1 : *Per Household and Per Capita Income of Sample Households*

(Rs.)

Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Income per Household								
Ajmer	3806	3970	5086	7368	8411	11739	16427	8115
Banswara	3481	3754	4721	7100	8636	11204	13375	7461
Barmer	2741	2912	3871	5206	5913	8321	11076	5720
Churu	3269	3521	4226	6635	7942	10730	13164	7069
Combined	3324	3539	4476	6577	7725	10498	13511	7093
Income per Capita								
Ajmer	692	735	942	1293	1402	1677	2190	1276
Banswara	633	695	874	1246	1439	1601	1783	1182
Barmer	498	539	717	913	986	1189	1477	903
Churu	594	652	782	1164	1324	1533	1755	1115
Combined	604	655	829	1154	1288	1500	1801	1119

5.2 Classification of Households in Different Income Groups

The total households of Ajmer, Banswara, Barmer and Churu districts were classified in different income groups across all size groups of holdings (Table 5.2). The frequence distribution of households indicated that about 83 per cent of total households in Ajmer district, 83 per cent in Banswara district, 95 per cent in case of Barmer district, 88 per cent in Churu district and 82 per cent at the combined

Table 5.2 : *Distribution of Households : According to Different Income and Farm Size Groups*

(Rs./No.)

Income/ District	Land Size Groups							
	Landless	< 2.5	2.5 - 5.0	5.0 - 7.5	7.5 - 10.0	10.0-15.0	15.0 +	Total
Below 1500								
Ajmer	27(52.94) (24.77)	31(51.67) (28.44)	22(21.36) (20.18)	6(13.04) (5.50)	12(30.00) (11.01)	5(14.29) (4.59)	6(20.00) (5.51)	109(29.86) (100.00)
Banswara	24(48.00) (24.74)	29(46.77) (29.90)	18(20.45) (18.56)	13(27.08) (13.40)	9(27.27) (9.28)	3(10.00) (3.09)	1(4.35) (1.03)	97(29.04) (100.00)
Barmer	41(56.16) (24.26)	51(69.87) (30.18)	25(37.88) (14.79)	17(42.50) (10.06)	16(34.78) (9.47)	9(21.43) (5.33)	10(23.26) (5.92)	169(44.13) (100.00)
Churu	17(54.84) (15.89)	33(60.00) (30.84)	19(30.65) (17.76)	21(40.38) (19.63)	7(21.21) (6.54)	7(29.17) (6.54)	3(15.00) (2.80)	107(38.63) (100.00)
Combined	109(53.17) (22.61)	144(57.60) (29.87)	84(26.33) (17.43)	57(30.65) (11.83)	44(28.95) (9.13)	24(18.32) (4.98)	20(17.24) (4.15)	482(35.47) (100.00)
1500 TO 2500								
Ajmer	16(31.37) (14.95)	19(31.67) (17.76)	45(43.69) (42.06)	11(23.91) (10.28)	5(12.50) (4.67)	9(25.71) (8.41)	2(6.67) (1.87)	107(29.32) (100.00)
Banswara	15(30.00) (15.00)	20(32.26) (20.00)	28(31.82) (28.00)	18(37.50) (18.00)	9(27.27) (9.00)	6(20.00) (6.00)	4(17.39) (4.00)	100(29.94) (100.00)
Barmer	19(26.03) (19.79)	16(21.92) (16.67)	21(31.82) (21.88)	14(35.00) (14.58)	15(32.61) (15.63)	4(9.52) (4.16)	7(16.28) (7.29)	96(25.07) (100.00)
Churu	8(25.81) (9.09)	19(34.55) (21.59)	23(37.10) (26.14)	19(36.54) (21.59)	12(36.37) (13.64)	2(8.34) (2.27)	5(25.00) (5.68)	88(31.77) (100.00)
Combined	58(28.29) (14.83)	74(29.60) (18.93)	117(36.68) (29.92)	62(33.33) (15.86)	41(26.97) (10.49)	21(16.03) (5.37)	18(15.52) (4.60)	391(28.77) (100.00)

Table 5.2 (contd...)

Income/ District	Land Size Groups							
	Landless	< 2.5	2.5 - 5.0	5.0 - 7.5	7.5 - 10.0	10.0-15.0	15.0 +	Total
2500 to 4000								
Ajmer	8(15.69) (9.30)	10(16.66) (11.63)	24(23.30) (27.91)	16(34.79) (18.60)	16(40.00) (18.60)	7(20.00) (8.14)	5(16.67) (5.81)	86(23.56) (100.00)
Banswara	11(22.00) (13.92)	13(20.97) (16.46)	25(28.41) (31.65)	7(14.59) (8.86)	10(30.31) (12.66)	4(13.33) (5.06)	9(39.13) (11.39)	79(23.65) (100.00)
Barmer	13(17.81) (18.05)	6(8.21) (8.33)	20(30.30) (27.78)	5(12.50) (6.94)	4(8.70) (5.56)	13(30.95) (18.06)	11(25.58) (15.28)	72(18.79) (100.00)
Churu	6(19.35) (12.50)	3(5.45) (6.25)	17(27.42) (35.42)	8(15.39) (16.67)	6(18.18) (12.50)	6(25.00) (12.50)	2(10.00) (4.16)	48(17.33) (100.00)
Combined	38(18.54) (13.34)	32(12.80) (11.23)	86(26.96) (30.18)	36(19.35) (12.63)	36(23.68) (12.63)	30(22.90) (10.53)	27(23.28) (9.47)	285(20.97) (100.00)
4000 to 6000								
Ajmer	-	-	12(11.65) (35.29)	8(17.39) (23.53)	5(12.50) (14.71)	6(17.14) (17.65)	3(10.00) (8.82)	34(9.32) (100.00)
Banswara	-	-	17(19.32) (51.52)	3(6.25) (9.09)	3(9.09) (9.09)	8(26.67) (24.24)	2(8.70) (6.06)	33(9.88) (100.00)
Barmer	-	-	-	2(5.00) (8.00)	11(23.91) (44.00)	7(16.67) (28.00)	5(11.63) (20.00)	25(6.53) (100.00)
Churu	-	-	3(4.83) (15.00)	4(7.69) (20.00)	5(15.15) (25.00)	2(8.33) (10.00)	6(30.00) (30.00)	20(7.22) (100.00)
Combined	-	-	32(10.03) (28.57)	17(9.14) (15.18)	24(15.79) (21.43)	23(17.56) (20.53)	16(13.79) (14.29)	112(8.24) (100.00)

Table 5.2 (contd...)

Income/ District	Land Size Groups							
	Landless	< 2.5	2.5 - 5.0	5.0 - 7.5	7.5 - 10.0	10.0-15.0	15.0 +	Total
6000 to 10000								
Ajmer	-	-	-	5(10.87) (27.78)	2(5.00) (11.11)	4(11.43) (22.22)	7(23.33) (38.89)	18(4.93) (100.00)
Banswara	-	-	-	7(14.58) (43.75)	2(6.06) (12.50)	4(13.33) (25.00)	3(13.04) (18.75)	16(4.79) (100.00)
Barmer	-	-	-	2(5.00) (10.53)	-	9(21.43) (47.37)	8(18.60) (42.10)	19(4.96) (100.00)
Churu	-	-	-	-	3(9.09) (30.00)	6(25.00) (60.00)	1(5.00) (10.00)	10(3.61) (100.00)
Combined	-	-	-	14(7.53) (22.23)	7(4.61) (11.11)	23(17.56) (36.51)	19(16.38) (30.16)	63(4.64) (100.00)
Above 10000								
Ajmer	-	-	-	-	-	4(11.43) (36.36)	7(23.33) (63.64)	11(3.01) (100.00)
Banswara	-	-	-	-	-	5(16.67) (55.56)	4(17.39) (44.44)	9(2.70) (100.00)
Barmer	-	-	-	-	-	-	2(4.65) (100.00)	2(0.52) (100.00)
Churu	-	-	-	-	-	1(4.16) (25.00)	3(15.00) (75.00)	4(1.44) (100.00)
Combined	-	-	-	-	-	10(7.63) (38.46)	16(13.79) (61.54)	26(1.91) (100.00)

Table 5.2 (contd...)

Income/ District	Land Size Groups							
	Landless	< 2.5	2.5 - 5.0	5.0 - 7.5	7.5 - 10.0	10.0-15.0	15.0 +	Total
Total								
Ajmer	51(100.0) (13.97)	60(100.0) (16.44)	103(100.0) (28.22)	46(100.0) (12.60)	40(100.0) (10.96)	35(100.0) (9.59)	30(100.0) (8.22)	365(100.0) (100.00)
Banswara	50(100.0) (14.97)	61(100.0) (18.56)	88(100.0) (26.35)	48(100.0) (14.37)	33(100.0) (9.88)	30(100.0) (8.98)	23(100.0) (6.89)	334(100.0) (100.00)
Barmer	73(100.0) (19.06)	73(100.0) (19.06)	66(100.0) (17.23)	40(100.0) (10.44)	46(100.0) (12.01)	42(100.0) (10.97)	43(100.0) (11.23)	383(100.0) (100.00)
Churu	31(100.0) (11.19)	55(100.0) (19.86)	62(100.0) (22.38)	52(100.0) (18.77)	33(100.0) (11.91)	24(100.0) (8.67)	20(100.0) (7.22)	277(100.0) (100.00)
Combined	205(100.0) (15.08)	250(100.0) (18.40)	319(100.0) (23.47)	186(100.0) (13.69)	152(100.0) (11.18)	131(100.0) (9.64)	116(100.0) (8.54)	1359(100.0) (100.00)

Note : Figures in brackets refers to percentage of total.

level of these four districts had an annual income of less than Rs.4000. Some 8 per cent of the households could earn an annual income of Rs.4000 - 6000. The proportion of such households was more in Ajmer and Banswara districts as compared to the districts of Barmer and Churu. The households in the income range of Rs.6000-10,000 were around 5 per cent of total households in the district of Ajmer, Banswara and Churu as against 4 per cent in Barmer district and 5 per cent at the aggregate level. Moreover, the proportion of total households in the income group of Rs.10,000 and above was highest in Ajmer district, i.e. 3.01 per cent of total households as compared 2.70 per cent in

Banswara district, 0.52 per cent in Barmer district, 1.44 per cent in Churu district and 1.91 per cent in the total sample.

The proportion of total landless households with the annual income of less than Rs.4000 constituted around 50 per cent in the total sample. This percentage was more in the district of Barmer and Churu as compared with the districts of Ajmer and Banswara. The data showed that the households owning no land or small land size are more in the low income range as compared to the large land owning households. This is true in respect of each of our sample district. The households with less than 2.5 acres of land could not earn income of Rs.4000 and above. Such situation reflected more in case of Barmer district which had relatively low level of agriculture development and high degree of drought proneness.

5.3 Expenditure and Poverty

The annual expenditure per household was estimated to be Rs.6269 in the four districts combined. At the inter-district level the highest per household expenditure of Rs.6565 was made by the households of Ajmer district followed by Rs.6522 in case of Banswara, Rs.6224 in Churu and the lowest expenditure of Rs.5765 by the households of Barmer district. Significant variation in expenditure pattern of different land size groups within each of the sample district is evident. However the data showed the increasing trend of expenditure with the size of land owned by different

households. The expenditure ranged from Rs.3971 in case of landless households to Rs.8371 of those households who owned more than 15 acres of land. It also varied from Rs.3112 of landless households to Rs.10819 of households owning more than 15 acres of land in the district of Barmer which emerged to be least developed among all sample districts of Rajasthan.

Table 5.3 : *Expenditure Per Household and Per Capita of the Sample Households*

(Rs.)

Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Expenditure per Household								
Ajmer	3971	3921	4926	7389	8162	9217	8371	6565
Banswara	3547	3700	4678	7021	8536	8987	9186	6522
Barmer	3112	3014	3916	5318	5902	8274	10819	5765
Churu	3372	3489	4182	6599	7883	8723	9322	6224
Combined	3501	3531	4426	6582	7621	8800	9425	6269
Expenditure per Capita								
Ajmer	722	737	912	1296	1360	1317	1116	1066
Banswara	645	695	866	1232	1423	1284	1225	1053
Barmer	566	567	725	933	984	1182	1143	729
Churu	613	656	774	1158	1314	1246	1243	1001
Combined	637	664	819	1155	1270	1257	932	962

The annual per capita expenditure turned out to be Rs.962 at the aggregate level of all four districts. The annual per capita expenditure pattern indicated the trend similar to that of annual expenditure per household. It was

found to be Rs.1066 in Ajmer, Rs.1053 in Banswara, Rs.1001 in Churu and Rs.729 in Barmer district. A wide variation across different land size groups was also evident in case of annual per capita expenditure also.

If the per capita annual expenditure of less than Rs.759.60 is taken into account as a cut off point of estimating the population below the poverty line (BPL) during 1979-80, then with price increase of 7.32 per cent in 1980-81 and 1981-82, this cut off point goes to Rs.874.92 during 1981-82, the year to which our sample data pertained. Thus the population in the rural areas of Rajasthan with a per capita annual expenditure of Rs.874.92 in 1981-82 could be considered as the one living below the poverty line. Considering this criteria, all the landless households which constituted 15.08 per cent and all households owning land below 2.5 acres which were 18.40 per cent in the total sample fell below poverty line. The households owning land size of 2.5 to 5.0 acres which were 28 per cent, 21 per cent and 20 per cent in the districts of Banswara, Barmer and Churu respectively were found to be below poverty line. At the combined level, all the households of Barmer district, irrespective of their land holdings size, whose share in total sample was 28.18 per cent were found to have income below the poverty line.

Thus the proportion of total population living below poverty line may come out slightly higher in all the four

sample drought prone districts of Rajasthan provided household-wise per capita annual expenditure is taken into consideration.

5.4 Household Savings

The average income saved by the households of these districts was found to be very low. It was Rs.824 at the aggregate level of all the four districts. At the inter-district level, the saving per household was highest in Ajmer district, i.e. Rs.1550 followed by Banswara (Rs.939), Churu (Rs.845) and Barmer (Rs.45) (Table 5.4).

Table 5.4 : *Savings by the Sample Households*

(Rs.)

Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Savings per Household								
Ajmer	-165	49	160	- 21	249	2522	8056	1550
Banswara	- 66	54	43	79	100	2217	4189	939
Barmer	-371	102	45	-112	11	47	257	- 45
Churu	-103	32	44	36	59	2007	3842	845
Combined	-177	8	50	- 5	104	1698	4086	824
Savings as % of Total Income								
Ajmer	- 4.34	1.23	3.15	-0.29	2.96	21.48	49.04	19.10
Banswara	- 1.90	1.44	0.91	1.11	1.16	19.79	31.32	12.59
Barmer	-13.54	-3.50	1.16	-2.15	0.19	0.56	2.32	-0.79
Churu	- 3.15	0.91	1.04	0.54	0.74	18.70	29.19	11.95
Combined	- 5.32	0.23	1.12	0.08	1.35	16.17	30.24	11.62

The saving as percentage of total income of all household was only 11.62 per cent. It varied from 19.10 per cent in Ajmer district to 12.59 per cent in Banswara district, 11.95 per cent in Churu district and -0.79 per cent in Barmer district.

At the inter-farm level all the landless households had negative saving. The households of Barmer district owning land upto 2.5 acres and the households of Ajmer, Barmer and Churu districts having land between 5.00 to 7.00 acres had no saving at all. The level of saving and saving as percentage of total income increased with the increase in land size.

5.5 Indebtedness

How many rural households are indebted and for which purpose these households have taken loan from different sources characterise not only the nature and form of rural indebtedness but also indicate the socio-economic conditions of the households. The amount of loan taken and the purpose of loan was obtained from the sample households. The data showed that all the landless households of these drought prone district were found to be in debt. The entire loan amount was utilized mainly for unproductive purposes of meeting the households expenses. All the sample households owning land of less than 2.5 acres in Barmer district were found to have taken loan and that too mostly for unproductive

Table 5.5 : *Distribution of Indebted Households*

(Percentage)

Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Ajmer								
Productive Use (%)	-	-	-	21.02	-	-	-	10.51
Unproductive Use(%)	100.00	-	-	78.80	-	-	-	89.49
Total (No.HHs)	51	-	-	46	-	-	-	97
Banswara								
Productive Use (%)	-	-	-	-	-	-	-	-
Unproductive Use(%)	100.00	-	-	-	-	-	-	100.00
Total (No.HHs)	50	-	-	-	-	-	-	50
Barmer								
Productive Use (%)	-	0.49	-	19.97	-	-	-	6.82
Unproductuve Use(%)	100.00	99.51	-	80.03	-	-	-	93.18
Total (No.HHs)	73	73	-	40	-	-	-	186
Churu								
Productive Use (%)	-	-	-	-	-	-	-	6.82
Unproductive Use(%)	100.00	-	-	-	-	-	-	100.00
Total (No.HHs)	31	-	-	-	-	-	-	31
Combined								
Productive Use (%)	-	0.49	-	20.49	-	-	-	10.25
Unproductive Use(%)	100.00	99.51	-	79.51	-	-	-	89.75
Total (No.HHs)	205	73	-	86	-	-	-	292

use. The households owning land between 5 to 7.50 acres in Ajmer and Barmer districts borrowed money and used its 79 per cent and 80 per cent respectively for unproductive purposes.

Thus in the total sample, 21 per cent households borrowed money and 90 per cent of this borrowed money was used for unproductive purposes.

Table 5.6 : *Utilisation Pattern of Loan Amount*

Districts	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Ajmer								
Productive Use (%)	-	-	-	25.72	-	-	-	12.86
Unproductive Use(%)	100.00	-	-	74.28	-	-	-	37.14
Total (No.HHs)	8415	-	-	966	-	-	-	9381
Banswara								
Productive Use (%)	-	-	-	-	-	-	-	-
Unproductive Use(%)	100.00	-	-	-	-	-	-	100.00
Total (No.HHs)	3300	-	-	-	-	-	-	3300
Barmer								
Productive Use (%)	-	1.77	-	23.91	-	-	-	8.56
Unproductuve Use(%)	100.00	98.23	-	76.09	-	-	-	91.44
Total (No.HHs)	27083	7446	-	4480	-	-	-	39009
Churu								
Productive Use (%)	-	-	-	-	-	-	-	-
Unproductive Use(%)	100.00	-	-	-	-	-	-	100.00
Total (No.HHs)	3193	-	-	-	-	-	-	3193
Combined								
Productive Use (%)	-	1.77	-	24.82	-	-	-	8.86
Unproductive Use(%)	100.00	98.23	-	75.18	-	-	-	91.14
Total (No.HHs)	36285	7446	-	430	-	-	-	44161

5.6 Summary

In the sample drought prone districts, Rs.7093 and Rs.1119 was the per household and per capita annual income. Both the income levels were found to be highest in Ajmer

district and lowest in Churu district. The data showed that income earned by the landless households and households owning land upto 2.5 acres was roughly half of the income earned by the households of large size of holdings. The overall pattern of income generation across different land size groups indicated substantial disparity.

The distribution of households in different income groups indicated that about 83 per cent of total households in Ajmer district, 83 per cent in Banswara district, 95 per cent in Barmer district, 88 per cent in Churu district and 82 per cent at the aggregate level of all four districts had an annual income of less than Rs.4000. It was evident that households owning no land or small size are more in the low income group as compared to the large land holding households.

The annual expenditure per household was estimated to be Rs.6269 in the four districts combined. At the inter-district level, highest per household expenditure of Rs.6565 was made by the households of Ajmer district and the lowest of Rs.5765 by the households of Barmer district. The annual per capita expenditure pattern indicated similar trend to that of per household expenditure.

The per capita annual expenditure of Rs.874.92 was considered as a cut off point to estimate the sample population below the poverty line. On this criteria, all the landless households which constituted 15.08 per cent and all

households which had land below 2.5 acres constituting 18.40 per cent were below the poverty line. The households with land size of 2.5 to 5.0 acres which were 28 per cent, 21 per cent and 20 per cent in the districts of Banswara, Barmer and Churu respectively were found to be below poverty line. All the households of Barmer district, irrespective of land owned who constituted 28.18 per cent in the sample were found to be below poverty line. In fact, the proportion of households below poverty line may become higher in all the four sample districts provided household-wise per capita annual expenditure is taken into consideration.

The average income saved by the households of these districts was found to be very low. It was only Rs.824 annually in the aggregate sample. In this case, the households of Ajmer district had highest and that of Barmer district lowest saving. A positive relationship in the level of saving and saving as percentage of total income with size of land owned by households was found in the sample districts.

A large number of the sample households were also found to be indebted. Those who owned no land or marginal and small size were indebted because they had taken loans mostly for unproductive purposes. All this indicated the poor economic condition of sample households.

CHAPTER IV

IMPACT OF DROUGHT AND DEVELOPMENT PROGRAMMES

Agriculture in the drought prone areas is a frequent victim of scanty and unpredictible rainfall and this too in the absence of an adequately assured supply of water for irrigation. This causes great hardships to rural people in these areas. The life of rural population becomes much more hardened at the time of drought occurrence. The people suffer from the most needed requirements due to crop failure and drinking water shortage. A major proportion of cattles dies due to paucity of fodder, feeds and water. The condition of those who are landless or own negligible land and material resources and primarily depend on wage employment, becomes much worse due to lack of purchasing power. In fact, agriculture being the backbone of the rural economy is adversely hit by the occurrence of recurring drought, leading to a number of socio-economic problems.

In the present chapter an attempt has been made to discuss the impact of drought on crop production and livestock in the context of four sample drought prone districts of Rajasthan. Various dimensions of drinking water problem in these districts have been discussed. The impact

of development programmes on rural households has also been assessed. All these issues have been examined on the basis of primary data collected from the sample villages belonging to these districts.

6.1 Drought and Cultivation

The cultivators of drought prone areas are generally not in position to utilize the entire cultivated area in a drought year. Such situation was also found in these selected drought prone districts (Table 6.1). During drought year, 92.41 per cent area of the normal year was under cultivation in the four districts combined. Maximum area under cultivation during drought year, i.e. 94.01 per cent of normal year was found in Churu, followed by 92.63 per cent in Banswara, 91.96 per cent in Ajmer and 91.03 per cent in Barmer district. The data showed a similar trend in respect of use of cultivated area during the drought year of all categories of farm households except the landless group (who cultivated on leased-in land), who cultivated hundred per cent of their cropped area during the drought year in the districts of Banswara, Barmer and Churu. This situation can be inferred to the fact that the tenant households had no alternative except wage employment and some crop production and they cultivated all leased-in area in expectation of rainfall to get some production. Though the entire

Table 6.1 : *Distribution of Cultivated Area During Normal and Drought Years of Sample Households : According to the Farm Size Groups*

(Per Cent)

Particulars	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Ajmer								
Normal Year	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Drought Year 1981	-	96.78	92.86	87.01	86.38	92.37	96.35	91.96
Area with No Yield During Drought 1981	-	100.0	100.0	91.03	75.21	63.17	64.00	82.23
Banswara								
Normal Year	100.0	100.0	100.0	100.0	100.0	100.0	-	100.0
Drought Year 1981	100.0	92.21	98.37	90.21	78.70	96.21	-	92.63
Area with No Yield During Drought 1981	100.0	100.0	100.0	89.36	80.07	60.21	-	85.31
Barmer								
Normal Year	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Drought Year 1981	100.0	98.77	92.78	91.78	89.11	82.38	76.59	91.03
Area with No Yield During Drought 1981	100.0	100.0	100.0	98.16	85.23	73.57	73.26	94.74
Churu								
Normal Year	100.0	100.0	100.0	100.0	100.0	100.0	-	100.0
Drought Year 1981	100.0	92.38	96.32	92.31	86.12	89.31	-	94.01
Area with No Yield During Drought 1981	100.0	100.0	98.17	88.66	76.61	66.35	-	84.63
Combined								
Normal Year	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Drought Year 1981	100.0	96.94	96.89	90.33	85.08	90.07	86.47	92.41
Area with No Yield During Drought 1981	100.0	100.0	99.54	91.80	79.28	65.82	65.55	85.88

Note : Figures in brackets refer to percentage to total.

cultivated crops failed reflected from the data of area cultivated but yielded no production. It is evident that 85.88 per cent of total cultivated area yielded no production during drought year in the four districts combined. Maximum damage of yield loss was experienced in the district of Barmer as 94.74 per cent of the total area of sample households of this district had no production at all. In the remaining three districts, 85.31 per cent, 84.63 per cent and 82.23 per cent area yielded no crop production in Banswara, Churu and Ajmer districts.

Looking at the impact of drought on crop yield in different land size groups, it appeared that those owning larger land holdings experienced less production damage as compared to the marginal and small group of households.

6.2 Loss in Production

Agricultural production is adversely affected by drought in drought prone areas in three ways : firstly, a part of the area is turned into fallow land; secondly, major portion of the cultivated area becomes non-productive or non-yielding; and, thirdly, yield potential of the area under crops is reduced substantially. As a result both yield and production are drastically reduced at the time of drought. However, the impact of drought on production never remained uniform at the inter-farm household level within and across these drought

affected districts because of differences in the availability of irrigation sources.

The analysis of data on the impact of drought on value of production showed that value of crop production declined by 19.80 per cent during the drought year.

Table 6.2 : *alue of Agricultural Produces During Normal and Drought Years : According to the Farm Size Groups*

Particulars	Land Size Groups (Acres)							
	Land-less	<2.5	2.5-5.0	5.0-7.5	7.5-10.0	10.0-15.0	15+	Total
Ajmer								
Normal Year	-	29848	400625	616733	25778	636696	228513	1938193
Drought Year	-	-	-	55320	6390	234495	77694	373899
		(100.0)	(100.0)	(8.99)	(24.79)	(36.83)	(34.00)	(19.29)
Banswara								
Normal Year	13032	20199	228875	560541	621466	184892	-	1629005
Drought Year	-	-	-	59641	123858	73568	-	257067
	(100.0)	(100.0)	(100.0)	(10.64)	(19.93)	(39.79)		(0.16)
Barmer								
Normal Year	2245	213	41839	124236	352750	200443	345599	1067325
Drought Year	-	-	-	2285	52101	52977	57853	165216
	(100.0)	(100.0)	(100.0)	(1.84)	(14.77)	(26.43)	(16.74)	(15.48)
Churu								
Normal Year	49911	7075	46479	379574	179881	909469	-	1572389
Drought Year	-	-	5270	88782	42074	296941	-	433067
	(100.0)	(100.0)	(11.34)	(23.79)	(23.39)	(32.65)		(27.54)
Combined								
Normal Year	65188	57335	717818	1681084	1179875	1931500	574112	6206912
Drought Year	-	-	5270	206028	224423	657981	135547	1229249
	(100.0)	(100.0)	(0.73)	(12.25)	(19.02)	(34.06)	(23.61)	(19.80)

Note : Figures in brackets refer to percentage to total

6.3 Loss and Sale of Cattle

The loss in the crop cultivation and production that occurred during drought year, reduced household income and also caused fodder shortage in the drought prone districts. As a result two things happened. Firstly, peasants, specially poor and agricultural labourers were compelled to sell their cattle for subsistance, and, secondly, some of the cattles died due to paucity of fodder and feeds. Above fact was observed to be true in case of selected drought prone districts (Table 6.3).

The data on the loss of cattle life due to drought showed that on an averae 2.71 cattles worth Rs.773 were sold by each household in the four districts combined. At inter-district level, maximum sale of cattles during drought was observed in Barmer district, i.e. 3.70 cattles per household worth Rs.1136 and minimum 2.31 cattles worth Rs.915 in Ajmer district. In the remaining two districts of Churu and Banswara, on an average 2.16 cattles were sold worth Rs.1038 and 816 respectively. Looking at the problem from the angle of land owning status of households, 1.91 cattles worth Rs.429 were sold per landless household as compared to 3.25 cattles worth Rs.1487 by those households owning between 10-15 acres of land.

The households of the drought prone districts were not only forced to dispose off some of their cattles but, their cattles also died in large numbers due to the shortage of

Table 6.3 : *Average Number and Value of Cattles Sold and Died During the Drought Year : According to the Farm Size Group*

(No./Rs.)

Particulars	Land Size Group (Acres)														Total Loss of Cattle
	Landless		< 2.50		2.50-7.50		7.50-10.0		10.0-15.0		15.0 +		Total		
	Sold	Died	Sold	Died	Sold	Died	Sold	Died	Sold	Died	Sold	Died	Sold	Died	
Ajmer															
Average No. per Household	1.17	2.46	2.78	3.21	1.32	2.73	2.96	2.11	2.45	2.06	3.06	1.31	2.29	2.31	2.30
Average Value per Household	357	516	823	950	457	945	1356	966	1122	925	1374	590	915	815	864
Banswara															
Average No. per Household	1.73	3.06	2.36	3.11	1.97	2.86	2.11	2.73	2.31	2.38	2.51	1.62	2.16	2.63	2.39
Average Value per Household	363	643	699	920	682	990	966	1250	1058	1069	1127	742	816	936	876
Barmer															
Average No. per Household	2.78	4.94	3.49	5.16	4.38	3.71	3.16	3.38	4.62	2.88	3.76	2.46	3.70	3.66	3.68
Average Value per Household	584	995	1033	1527	1515	1284	1447	1548	2116	1293	1688	1136	1397	1297	1347
Churu															
Average No. per Household	1.97	2.67	2.17	2.97	2.41	2.38	3.00	2.41	3.61	2.63	2.92	1.36	2.68	2.40	2.54
Average Value per Household	413	560	642	879	834	823	1374	1104	1653	1181	1311	623	1038	862	950
Combined															
Average No. per Household	1.91	3.28	2.70	3.61	2.52	2.92	2.81	3.25	3.25	2.49	3.06	1.69	2.71	2.75	2.73
Average Value per Household	429	678	799	1069	872	1010	1286	1217	1487	1117	1375	773	1041	977	1009

fodder and feed. The Table 6.3 further showed that on an average 2.75 cattles died causing the loss of Rs.977 during drought year of 1981 in the four districts combined. Maximum deaths were reported from Barmer, i.e. 3.66 cattles worth Rs.1296 per household and minimum 2.31 cattles worth Rs.815 from Ajmer district. In the other two districts of Churu and Banswara 2.63 and 2.40 cattles iper household worth Rs.936 and 862 respectively died.

Combining both types of cattle loss, caused due to sale and death, on an average 2.73 cattles worth Rs.1009 were lost by the each of the sample households in the four districts combined. Maximum loss was reported from Barmer, i.e. 3.68 cattles worth Rs.1347 per household and minimum 2.30 cattle worth Rs.864 in Ajmer. The households in remaining two districts of Churu and Banswara had a loss of 2.54 cattles worth Rs.950 and 2.39 cattles worth Rs.876 respectively. The variation in number of deaths in each district may be the result of intensity of drought.

6.4 Sale of Assets

The occurrence of drought in 1981 resulted not only in cattles loss but household were forced to sell other assets also. On an average sale of assets worth Rs.602 was reported from each household in the four districts combined. Maximum sale of assets worth Rs.732 was reported in Barmer district

and minimum of Rs.501 in Churu district. The peasants owning land upto 10 acres and landless suffered most because the value of assets sold by them was relatively higher in their case as compared to those owning land more than 10 acres. The sale of household assets worth Rs.418 was reported from those households owning more than 10 acres of land. Thus the sale of household assets by smaller land owning households was higher as compared to the larger size land owning households.

Table 6.4 : *Sale of Other Assets During Drought Year : According to the Farm Size Group*

(Rs.)

Farm Size Group (Acres)	Districts				
	Ajmer	Banswara	Barmer	Churu	Combined
Landless	476	483	579	386	481
Less than 2.5	526	554	627	500	552
2.50 - 5.00	726	686	892	623	732
5.00 - 7.50	779	712	891	678	765
7.50 - 10.00	896	781	922	766	841
10.00 - 15.00	425	392	613	217	411
15.00 & Above	362	417	586	340	426
Average	598	579	730	501	602

6.5 Indebtedness

The occurrence of drought trapped rural people into the clutches of indebtedness due to nearly total crop failure, death and sale of cattles and other household assets. In order to meet the basic needs for living they were compelled to borrow money from different sources and at high rate of interest.

Traditionally village Mahajans were the major source of borrowing in these drought prone districts (Table 6.5). It is evident that out of total reported cases of borrowing during drought year of 1981, 53.20 per cent borrowed from village Mahajans in the four districts combined. Friends and relatives were the second source of borrowing providing loans to 25.10 per cent households who borrowed. Borrowing from the organised sectors of Banks and Cooperative Socieities were quite low as compared to traditional sources. The distrit-wise scenario indicated that maximum borrowing through Mahajan was found in Churu district which provided loans to 64.07 per cent of all borrowing households of the district. Out of these, 33.09 per cent of the total borrowers of Churu district paid 20 per cent and above interest rate followed by 28.81 per cent at the interest rate of 14 to 20 per cent and only 3.62 per cent cases at the rate of 6 to 14 per cent.

Friends and relatives were the second most popular source of borrowing. Their role was most in Barmer district

where they provided loans to 52.70 per cent of the total borrowing households followed by Churu with 25.48 per cent, Ajmer with 20.13 per cent and Banswara district with 18.25 per cent. In majority of the cases of borrowing through friends and relatives either no interest or nominal interest was charged.

Table 6.5 : *Proportion of Total Loans Taken from Different Sources at Different Interest Rates By the Sample Households*

Particulars	Source of Loan				
	Village Mahajan	Friends & Relatives	Cooperative Society	Bank	Total
Interest Free					
Ajmer	-	11.23	-	-	11.23
Banswara	-	13.31	-	-	13.31
Barmer	-	27.09	-	-	27.09
Churu	-	18.29	-	-	18.29
Combined	-	17.48	-	-	15.48
Less than 6 %					
Ajmer	-	-	-	-	-
Banswara	-	-	-	-	-
Barmer	-	4.38	-	-	4.38
Churu	-	-	-	-	-
Combined	-	4.38	-	-	1.09
6 - 14%					
Ajmer	6.21	7.18	6.21	14.79	34.39
Banswara	4.73	3.16	2.36	6.37	16.62
Barmer	1.07	11.23	1.01	-	13.31
Churu	2.48	4.28	3.48	4.19	14.43
Combined	3.62	6.46	3.26	8.45	19.22

Table 6.5 (contd...)

Particulars	Source of Loan				
	Village Mahajan	Friends & Relatives	Cooperative Society	Bank	Total
14 - 20%					
Ajmer	12.29	1.72	8.27	11.78	34.06
Banswara	20.18	-	-	9.23	29.41
Barmer	7.31	10.00	-	-	17.31
Churu	28.81	-	-	2.78	31.59
Combined	17.15	5.86	8.27	7.93	28.09
20 % & Above					
Ajmer	20.32	-	-	-	20.32
Banswara	38.88	1.78	-	-	40.66
Barmer	37.91	8.62	-	-	46.53
Churu	35.26	2.91	-	-	38.17
Combined	33.09	4.44	-	-	36.22
Total					
Ajmer	38.82	20.13	14.48	26.57	100.00
Banswara	63.79	18.25	2.36	15.60	100.00
Barmer	46.29	52.70	1.01	-	100.00
Churu	64.07	25.48	3.48	6.97	100.00
Combined	53.20	25.10	5.32	16.38	100.00

Table 6.5 also revealed the poor performance and reach of institutions like Banks and Cooperative Societies in the rural areas of drought prone districts. No case of loaning from these two sources was found in Barmer. In Ajmer district 26.57 per cent of the total loaning was through Banks with the interest rate of 6 to 20 per cent and 14.48

per cent from Cooperative Societies with similar rate of interest. In other three districts, the role of Banks and Cooperative Socieities was relatively low.

The analysis, thus revealed that even on the cost of higher rate of interest, rural people of drought prone areas preferred to borrow money from traditional sources like village Mahajan (Money Lender) or friends and relatives. The main reason may be the easy accessibility and availability of loan from the traditional sources as compared to organised sources.

6.6 Sources of Drinking Water

Generally wells were found as a major source of drinking water in the drought prone districts. 37.01 per cent of the total sample households were found to be dependent upon this traditional source of drinking water. Few years back, wells were the only source of drinking water for the entire population. Due to state efforts to provide the safe drinking water to villages and frequest droughts, the community handpumps were installed in the rural areas. Our primary data showed that 34.14 per cent of total households were using hand pumps as a source of drinking water in the four districts combined. 7.51 per cent households were utilizing their own hand pumps for drinking water purpose. The state also supplied drinking water through special vans in the severe scarcity villages. Around 14.94 per cent of

total households were using this facility. The maximum households of Banswara district could use this facility, i.e. 20.95 per cent followed by the households of Barmer (16.97 per cent), Ajmer (10.96 per cent) and Churu (10.11 per cent). The use of pond seemed to be very limited for drinking water purpose as only 6.40 per cent of total households were found to be using this source in the total sample. The 17.37 per cent households of Barmer district were using pond whereas in Churu and Ajmer districts only 4.69 per cent and 4.39 per cent of households were using the pond as a source for drinking water purpose.

Table 6.6 : *Distribution of Sample Households According to Different Sources of Drinking Water*

(Nos.)

Sources	Number of Households				
	Ajmer	Banswara	Barmer	Churu	Combined
Well	105 (28.77)	81 (24.25)	224 (58.49)	93 (33.57)	503 (37.01)
Handpump :					
Owned	36 (9.86)	29 (8.68)	14 (3.65)	23 (8.30)	102 (7.51)
Community	168 (46.02)	96 (28.75)	80 (20.89)	120 (43.33)	464 (34.14)
Supply through Special Vans	40 (10.96)	70 (20.95)	65 (16.97)	28 (10.11)	203 (14.94)
Pond	16 (4.39)	58 (17.37)	-	13 (4.69)	87 (6.40)
Total	365 (100.00)	334 (100.00)	383 (100.00)	277 (100.00)	1359 (100.00)

Note : Figures in brackets refer to percentages to total.

6.7 Access to Drinking Water 127

The wells were the important source of drinking water in drought prone districts. The number of wells was determined by the availability of underground water and size of population. Generally wells were constructed and used on the caste and community basis. Hence each community owned its own well located at the point of easy accessibility to the respective caste. The other sources of drinking water were located at few points in the village. Thus the people had to move outside of their households to fetch drinking water. The primary information collected from sample households on the distance covered by households to fetch drinking water from various sources was analysed (Table 6.7). It was evident that 48.34 per cent of all households members had to travel less than half kilometre to fetch drinking water. Around 32.82 per cent household members used to cover a distance half to one kilometre to get drinking water. The remaining 18.84 per cent had to walk one kilometre to 2 kilometres and above to get drinking water. The distance of 1 kilometre to 2 kilometres and above was covered by 32.92 per cent households as compared to 7.27 per cent in Ajmer district, 20.05 per cent in Banswara district and 12.96 per cent in the Churu district.

Thus in the districts of Barmer and Banswara, the availability of drinking water was difficult as the distance covered by substantial number of households to get drinking water was far enough.

Table 6.7 : *Spatial Distribution of Households from the Source of Drinking Water*

(Nos.)

Districts	Distance (Kms.)					
	< 0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0 +	Total
Ajmer	220 (60.27)	118 (32.46)	27 (7.27)	-	-	365 (100.00)
Banswara	179 (53.59)	88 (26.36)	46 (13.77)	14 (4.19)	7 (2.09)	334 (100.00)
Barmer	125 (32.77)	132 (34.31)	43 (11.23)	43 (11.23)	40 (10.46)	383 (100.00)
Churu	133 (48.13)	108 (38.91)	16 (5.73)	20 (7.23)	-	277 (100.00)
Combined	657 (48.34)	446 (32.82)	132 (9.71)	77 (5.57)	47 (3.46)	1359 (100.00)

Note : Figures in brackets refer to percentages to total.

6.8 Involvement of Family Members in Fetching Water

The easy accessibility of households to drinking water sources was found to be not easy. As most of the households were dependent on community handpumps and wells which were generally located at specific points in villges. As a result, the male, female and children of families used to get involved in fetching drinking water (Table 6.8). It is evident from the table that in case of households of each district, the involvement of females in drinking water was

most. Around 80 per cent females were engaged in fetching drinking water as compared to 18 per cent males and 2 per cent children. In Barmer and Banswara districts, the involvement of males was slightly more as compared to the males of other districts. More involvement of children in fetching drinking water was also evident in these two districts. A slightly difficult availability of drinking water may be one of the reasons for greater engagement of males and children along with females in these districts.

Table 6.8 : *Sex-wise Distribution of Family Members in Fetching Drinking Water*

(Nos.)

Districts	Person			
	Male	Female	Children	Total
Ajmer	127 (17.33)	592 (80.76)	14 (1.91)	733 (100.00)
Banswara	186 (22.38)	626 (75.33)	19 (2.29)	831 (100.00)
Barmer	221 (19.77)	867 (77.55)	30 (2.68)	1118 (100.00)
Churu	98 (12.20)	682 (84.93)	23 (2.87)	803 (100.00)
Combined	632 (18.13)	2767 (79.40)	86 (2.47)	3485 (100.00)

Note : Figures in brackets refer to percentages in total

6.9 Development Programmes and Beneficiaries

The drought occurrence is a recurring in the areas where the monsoon is erratic with scanty rains. In order to face and cope with this natural challenge, the government

implemented various developmental programmes which included the provision of assets and skills, financial assistance and short term employment opportunities. The sole objective

Table 6.9 : *Total Number of Households Benefited Under Different Programmes/Schemes*

(Nos.)

Land Size Group (Acres)/ Districts	Programmes/Schemes											
	House Sites	Anty-odaya	Food for Work	NREP	IRDP	Animal Husbandry	Soil Conservation	Crop Loan	Loan for Other Agrl. Practices	Agrl. input distribution	Scheme for Rural Industry	Total
Landless												
Ajmer	2	35	87	7	6	-	-	-	-	-	-	137
Banswara	1	41	92	5	7	-	-	-	-	-	-	146
Barmer	4	22	121	2	4	-	-	-	-	-	-	153
Churu	1	32	69	5	7	-	-	-	-	-	-	114
Combined	8	130	369	19	24	-	-	-	-	-	-	550
Less than 2.50												
Ajmer	1	6	18	6	14	-	-	-	-	3	-	48
Banswara	-	8	11	4	11	-	-	-	-	2	-	36
Barmer	1	16	24	1	3	-	-	-	-	-	-	45
Churu	-	9	9	3	7	-	-	-	-	-	-	28
Combined	2	39	62	14	35	-	-	-	-	5	-	157
2.50 - 5.00												
Ajmer	-	-	-	3	-	3	2	-	-	21	3	32
Banswara	1	-	-	1	-	2	1	-	-	14	1	20
Barmer	-	-	-	2	2	-	-	-	-	6	2	12
Churu	-	-	-	4	-	-	-	-	-	11	4	19
Combined	1	-	-	10	2	5	3	-	-	52	10	83

Table 6.9 (contd..)

Land Size Group (Acres)/ Districts	Programme/Scheme											
	House Sites	Anty-odaya	Food for Work	NREP	IRDP	Animal Husbandry	Soil Conservation	Crop Loan	Loan for Other Agrl. Practices	Agrl. input distribution	Scheme for Rural Industry	Total
5.00 - 7.50												
Ajmer	-	-	-	1	1	6	2	6	8	-	1	25
Banswara	-	-	-	1	1	4	-	3	7	-	-	16
Barmer	-	-	-	-	-	-	-	-	2	-	-	2
Churu	-	-	-	-	-	1	-	1	-	-	-	2
Combined	-	-	-	2	2	11	2	10	17	-	1	45
7.50 - 10.00												
Ajmer	-	-	-	-	-	-	-	-	2	-	-	2
Banswara	-	-	-	-	-	-	1	-	-	-	-	1
Barmer	-	-	-	-	-	-	-	1	-	-	-	1
Churu	-	-	-	-	-	-	-	-	3	-	-	3
Combined	-	-	-	-	-	-	1	1	5	-	-	7
10.00 - 15.00												
Ajmer	-	-	-	-	-	-	-	2	4	-	-	6
Banswara	-	-	-	-	-	-	-	3	1	-	-	4
Barmer	-	-	-	-	-	-	-	1	1	-	-	2
Churu	-	-	-	-	-	-	-	4	1	-	-	5
Combined	-	-	-	-	-	-	-	10	7	-	-	17
15.00 & Above												
Ajmer	-	-	-	-	-	-	-	-	5	-	-	5
Banswara	-	-	-	-	-	-	-	-	2	-	-	2
Barmer	-	-	-	-	-	-	-	-	1	-	-	1
Churu	-	-	-	-	-	-	-	-	2	-	-	2
Combined	-	-	-	-	-	-	-	-	10	-	-	10
Total												
Ajmer	3	41	105	17	21	9	4	8	19	24	4	255 365
Banswara	2	49	103	11	19	6	2	6	10	16	1	225 334
Barmer	5	38	145	5	9	-	-	2	4	6	2	216 383
Churu	1	41	78	12	14	1	-	5	6	11	4	173 277
Combined	11	169	431	45	63	16	6	21	39	57	11	869 1359

behind the implementation of these programmes was that the village people particularly the landless, marginal and small farmers, who were the most sufferers would be benefitted and their economic condition could be elevated to face the adversaries of the drought. In this regard the impact of development programmes was found not much impressive as our primary data showed (Table 6.9).

Out of totalsample households of the four districts combined, 63.94 per cent were benefited from any of the eleven listed development programmes during the last 10 years. Maximum number of beneficiary households, i.e. 69.68 per cent of the district sample was recorded in Ajmer followed by 67.36 per cent in Banswara, 62.45 per cent in Churu and 56.40 per cent in Barmer. In absolute terms, out of total 899 beneficiary households in the four districts combined, 550 were those of landless class, covering 63.29 per cent of all beneficiaries. The large number of landless households were beneficiary due to the coverage of 369 and 130 households under food and work and Antyodaya Programmes respectively. Remaining 24, 19 and 8 landless households were benefited under Integrated Rural Development Programme (IRDP), National Rural Employment Programme (NREP) and financial assistance for house construction. 18.07 per cent of the total households owning land upto 2.50 acres were also found to be benefited through above mentioned programmes. Out of total beneficiary households, 9.55 per cent were of those owning land between 2.5 to 5 acres of land. Those

beneficiary households owning land above 5 acres generally availed the programmes advantages rendered through the agricultural development programmes.

6.10 Summary

Erratic nature of rainfall and lack of an assured supply of water for irrigation made agriculture fully nature bound in drought prone areas. As a result loss in normal agricultural production that formed the main basis of rural life created hardships in various forms or orders to the village people in these areas. Since others means of livilihood except agriculture were hardly available in these areas, the farmers cultivated around 99 per cent of the agricultural area of normal year during drought year of 1981 in the sample districts of Rajasthan. However, the impact of drought was so intense that around 86 per cent of total cultivated area yielded no production at all. The miseries and sufferings of the people multiplied and people resorted to large scale sale of cattles and other assets. They were also trapped into the exploitative fold of indebtedness at a very high rate of interest. The drinking water became difficult to get as the members of households had to cover enough distance to get it. All this required state efforts to improve the conditions of these drought affected people. But the developmental programmes launched by the government did not benefit them all, particularly those who were economically poor.

CHAPTER VII

CONCLUSIONS

The drought prone area development programme was launched in India during 1974-75 with the objective to bring about improvement in the socio-economic status of landless, marginal and small farmers through securing optimum utilisation of land, labour, water, livestock and man power resources. The thrust of the effort was to restore a proper ecological balance by reducing severity of drought.

Thirteen districts, viz. Ajmer, Banswara, Barmer, Bikaner, Churu, Dungarpur, Jaisalmer, Jalor, Jhunjhunun, Jodhpur, Nagaur, Pali and Udaipur were identified as drought-prone districts of Rajasthan. These districts occupied 62 per cent of the total geographical area and 45 per cent of the total population of the state. The four drought prone districts namely, Ajmer, Banswara, Barmer and Churu were selected as sample districts for the purpose of this study.

The main objective of the study was to analyse the existing socio-economic conditions of the people of the drought prone areas. It was expected that such study would

provide not only baseline data and certain basic information about the people and area but a realistic basis for evaluating the impact of various programmes in formulating suitable strategy for the development of these areas. Thus four districts, 12 blocks, 36 villages and 6627 households were the basis of the study.

The socio-economic characteristics as showed by the data of sample villages indicated that the drought prone villages of Rajasthan were backward and under developed with little opportuities of income and employment. Agriculture was the main source of livelihood and it was found tyo be at subsistence level.

The demographic and occupational features of these areas showed the low literacy level, high dependence on agriculture for employment, relatively low migration of workers and low income level.

The analysis of data related to agricultural holdings showed a skewed pattern. The food crops were largely grown but the yield levels of all important crops were found to be comparatively low. Only small proportion of cultivated area was found to be irrigated. The agriculture being at the subsistence level, generation of food surplus was negligible.

The income in terms of per capita and per household was also found to be quite low. Substantial proportion of total

sample households were found to be below the poverty line (BPL). A large number of sample households were also found to be indebted. All this indicated the poor economic condition of sample households.

The recurring droughts and lack of assured irrigation facilities made agriculture fully nature bound in these areas. As a result, significant loss in agricultural production, death and forced sale of cattles and sharp decline in productivity of different crops was the dominant feature in these areas. The access to drinking water was also found to be difficult. The Government launched development programmes did not benefit much particularly to those who were economically poor.

All this presented a case of such an agriculture-dominated economy wherein the socio-economic condition of the people is tied up with nature in the condition of ecological degradation resulting from the people's pressure to harness limited supply of land and water for subsistence. Hence some appropriate strategy is required to develop these area and people so that the process of development could match to the ecological pattern that exists in such areas.